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contents

How Important Are Indiana's Exports?

Sion Raveed and William C. Renforth

1

Growing Quality Sawlogs in Indiana

Robert Menke

4

The 1973 Tax Package: The Effect on Local Schools

Donald W. Kiefer

8

Black Capitalism in Indianapolis

Brian E. Frost

13

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How Important Are Indiana's Exports?

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Are events occurring in the world marketplace important to Indiana? Some argue that the export segment of the economy can be safely ignored since, after all, only a mere 5 percent of the state's production finds its way into international trade. The occasional export order or sale abroad, while perhaps desirable, is considered relatively unimportant, not meriting substantial attention or consideration.

Others suggest that the low level of Indiana's exports is cause for concern. Exports, according to this argument, are a potential profitable source of business, of concern to the economic health of the state and nation. Therefore, efforts should be undertaken to develop this apparently neglected area.

The purpose of this article is to show that exports are a more significant activity than is commonly believed. In fact, a substantial portion of Indiana's production is sold abroad. The latest available figures from the U.S. Department of Commerce show that Indiana ranks eighth in exports among the fifty states, with close to \$1 billion in sales of manufacturing exports and \$300 million in agricultural exports. This represents an increase of about 150 percent over corresponding figures of a decade ago.¹

To visualize the true magnitude of Indiana's

1. *Current Industrial Reports, Survey of the Origins of Exports by Manufacturing Establishments* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1969).

TABLE 1

Indiana 1969 Gross State Product by Industry
in 1969 Dollars

Category	Dollars (in millions)
Mining	\$ 198
Construction	1,250
Manufacturing	9,977
Wholesale and retail trade	3,683
Finance, insurance, and real estate	2,535
Transportation, communication, and public utilities	1,861
Services	2,027
Total private nonfarm industry	21,531
Farm	914
Government	1,632
Total	24,077

SOURCE: Robert D. Shriner, *Indiana Gross State Product 1963-1970*, (Indianapolis: Indiana Department of Commerce, July 1971).

exports, it is necessary to determine what types of products are likely candidates for sale abroad. Table 1 presents Indiana gross state product (GSP) figures for each major economic sector. GSP is conceptually analogous to the measurement of economic activity provided on the national level by gross national product (GNP) statistics. The GSP figure of \$24.077 billion represents the total market value of the goods and services produced in Indiana in 1969.

Table 2 shows the pattern of exports from the state in 1969. Total exports of \$1.278

million amounted to 5.3 percent of GSP. This figure of 5.3 percent is deceptive, however; many of the items that constitute GSP are inherently unsuited for export. Persons in the service industry—doctors, plumbers, barbers, and so on—cannot export their output. Similarly, wholesale and retail operations, except for the 10 percent that make exports possible, are not a part of international trade.

For a variety of legal, political, and practical reasons, financial, insurance, and real estate transactions are almost totally lacking in export content; at most only 1.5 percent of these activities have international trade potential. The transportation, communications, and public utility industries located in Indiana are not equipped to sell abroad and thus are only nominal participants in exporting. Although state and local government services are not exportable, some of these services are exported indirectly by being a part of the value added of goods sold abroad.

Some products, such as Indiana limestone, have a relatively low value per pound. The profit margin from such products would not be sufficient to cover the cost of transportation to distant markets. International sales are thereby excluded.

Indiana has for years been at the center of

the U.S. hardwood industry and would, accordingly, be expected to be a major world supplier of hardwood. However, the geographical limits of this market are quite small. Every major continent, with the exception of Australia, has fairly substantial lumber resources and is fairly self-sufficient in meeting its own needs.

Many obstacles prevent Indiana's manufactured products from entering international trade.² For example, a product may not be keyed to foreign needs. Such products are unable to meet the requirements peculiar to foreign environments. The problem may be related to technological differences. American electrical equipment runs on a sixty-cycle current, which is unsuited for the fifty-cycle current found in most of the world. Also, few Indiana machine shops are equipped to produce on the metric standard extensively used abroad. Finally, there may be legal restrictions of size, chemical content, or safety that bar the product entirely.

Table 3 shows the effect of excluding all of these inherently nonexportable items from GSP; the result is a statement of the state's maximum export potential for the year. A

2. See J. Kent Pinney, *Indiana Obstacles of Foreign Trade* (Indianapolis: Indiana Department of Commerce, International Trade Division, 1971).

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TABLE 2

Distribution of Estimated Indiana Exports—1969

Category	Dollars (in millions)
<i>\$50 million and over</i>	
Transportation equipment	\$ 339.5
Nonelectrical machinery	183.2
Electrical machinery	113.5
Food and kindred products	96.3
Primary metals industries	58.9
Subtotal	791.4
<i>\$10-50 million</i>	
Fabricated metals industry	45.6
Chemicals and allied products	40.0
Instruments and related products	19.1
Ordinance and miscellaneous	17.0
Rubber and plastic products	14.6
Lumber and wood products	10.6
Subtotal	146.9
<i>Under \$10 million</i>	
Stone, clay, and glass products	5.7
Paper and allied products	4.6
Printing and publishing	3.0
Furniture and fixtures	3.0
Apparel and related products	2.6
Textile mills products	0.7
Leather and leather products	0.5
Subtotal	20.1
Total manufactured products	958.4
<i>Agricultural commodities</i>	
Soybeans	82.9
Corn	75.3
Wheat	25.7
All others	135.7
Total agricultural exports	319.6
Total exports	1,278.0

SOURCE: *Indiana International Trade* (Indianapolis: Indiana Department of Commerce, Division of International Trade, 1972).

comparison of Table 2 with Table 3 provides a clearer and more realistic picture of the importance of exports to the Indiana economy. More

TABLE 3

Potentially Exportable 1969 Indiana State Gross Product, by Industry, in 1969 Dollars

Category	Dollars (in millions)
Mining	\$ 3.9
Construction	0.0
Manufacturing	6,983.0
Wholesale and retail trade	368.3
Finance, insurance, and real estate	38.0
Transportation, communication, and public utilities	18.6
Services	20.3
Total private nonfarm industry	7,432.1
Farm	914.0
Government	0.0
Total	8,346.1

Actual exports as a percent of potential exports:
 $\$1,278 \div \$8,346 = 15.3\%$

SOURCE: Derived from Table 1 and Andreas Polemitis, *Indiana and U.S. Exports: Estimates and Analysis*, (Indianapolis: Indiana Department of Commerce, Division of International Trade, 1971).

than 15 percent of Indiana's exportable production was sold abroad.

Important as exports are to the state as a whole, they are even more critical in certain industrial sectors. For example, the transportation equipment industry, the third largest employer in the state, exported nearly one-third of its billion dollar output. Agriculture is another area in which exports play an especially dominant role. Fully 33 percent of the soybean crop, 64 percent of the wheat crop, and 17 percent of the corn crop is exported.

Hoosiers have long assumed that exports are of minor importance to employment and production in the state. However, external trade does exert a significant influence. In view of the devaluations of the dollar and the resulting decline in prices to foreign customers, foreign trade should exert a continually increasing impact on our economy.

Growing Quality Sawlogs in Indiana

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Forestry resources and industries are attaining increased economic importance in Indiana, according to Dr. J. C. Callahan, Department of Forestry and Conservation, Purdue University. Present timber production in Indiana ranges from 250 to 300 million board feet annually and is growing. Standing timber volumes are increasing. The current rate of growth versus drain is 3-2 cubic feet.

The preceding statement appeared recently in *Forestry Newsletter*, published by the Extension Service of Purdue University. The same article elaborated on the nature of the industry's contribution to the state's economy:

In 1970 the forest products industry was the fifth largest in the State in employment and value added through manufacture, just ahead of the food processing industry. The principal face veneer manufacturers in the United States are located in Indiana. Modernized saw mills as well as the newer pulp-paper and particle board industries have added a great deal to more complete utilization of low-grade logs and former mill wastes and contributed to the state's economy.

To this glowing report could be added the fact that jobs in the woodworking industries in Dubois County alone constitute 55 percent of the total manufacturing employment. Three-fourths of the state's 4 million acres of woodlands (300,000 acres in state and national forests) are contiguous to the wood industries in the upland areas of southern Indiana. It would seem that, at a time of critical fuel and raw material shortages, professional foresters

and Hoosier tree farmers are all set to provide quality lumber to industry on a sustained yield and sustained profit basis. It sounds easy with an average investment of \$125 per acre, each acre growing 350 board feet annually per acre, and a potential yield—at a capital gains rate—of 10 cents per board foot. Nothing, however, could be further from the truth.

WHY POOR TIMBER STANDS?

It is estimated that 85 to 90 percent of the wood used in Indiana industries comes from *outside* the state. Less than one-third of the face veneer logs originate locally. Wood-using industries have come to depend more and more on plastics and softwoods to keep going. Grain-printing machines each year reproduce millions of board feet of maple, walnut, oak, and pecan finishes on pine, hardboard, and particleboard. Even expensive furniture contains a mix of scarce hardwoods, which are toned and stained to match thin-face veneers. (Paradoxically, despite shortages and inflation, the furniture buyer is generally able to buy better quality furniture for relatively less money today because of the extremely competitive nature of the industry, the development of substitute materials, and dramatically improved techniques of manufacture.)

The official figures on volume saw timber

growth are unintentionally deceptive. The last forest survey showed cubic footage had increased by one-fourth in the seventeen years since the previous survey of 1950. The volume of saw timber growth in southern Indiana was reported to have increased almost two-thirds to 8.4 billion board feet.

But the statistics do not describe the quality of growth. The abandonment of farms during the depression and the availability of quality Appalachian and southern hardwoods at a low price did allow natural reforestation to occur across the great Crawford and Norman Uplands of Southern Indiana. Only limited harvesting was done for thirty years from depression times until the booming sixties. The old woods came back, but, as usual, TSI (Timber Stand Improvement) was neglected. Nor is much being done today to improve the quality of hardwood stands.

There are several reasons for this. For one thing, it takes a long time to grow a prime 16-inch DBH (diameter breast height) hardwood sawlog tree—some forty to eighty years depending on the site. The cooler, moist, north and east slopes and the areas of deeper soils in the coves and the lower hillsides, sheltered from the winds, produce the best growth. The timber on rocky ridges and on the sun-dried south and west slopes is hardly worth the expense of improvement by thinning, girdling, and killing vines. The value of these trees lies mostly in their contribution to the general ecology of the forest as windbreaks, watersheds, and wildlife habitats; in the production of oxygen; and in their recreation and aesthetic values. Lack of immediate economic incentive, then, is the primary reason for the failure to improve timber stands to achieve quality saw timber growth.

The efforts of state service foresters to improve the quality of timber are blocked by the nature of land ownership. About 90 percent of our woodlands are nothing more than small woodlots owned by busy farmers or equally

busy city folks. The large majority of these owners know nothing about forestry and do not avail themselves of the TSI or marketing services available through the Indiana Department of Natural Resources.

The average woods produces cubic footage at perhaps 25 to 30 percent of capacity and only a few high-grade logs. A stand is often virtually clear cut by a peckerwood sawmill for railroad ties at the very moment trees are beginning their maximum growth.

Since sawlog and small roundwood pulp sales constitute only a fraction of 1 percent of the total agricultural receipts in Indiana, it is difficult to get anyone excited about tree farming, least of all the owner himself. With the high price of beef, the easiest alternative is to hire a bulldozer to push the scrub and slash into a gully and plant fescue for pasture.

Despite the difficulties with fire, disease, bulldozers, and peckerwood sawmills, there are still about 261,000 acres of private woodlands that have been "classified" in Indiana (planted and dedicated to forestry and exempted from most property tax). Because of crucial environmental problems, the public is seemingly now more aware of the ecological values of forest land, and, by extension, this awareness could lead to a greater appreciation of the relationship between forest resources and wood using industries.

The veneer industry in Indiana, working through trade groups and governmental agencies, has been successful in encouraging the planting of walnut trees in small scattered fields with deep rich soils. Under federal subsidy, thousands of worn-out fields have been planted to nurse crops of pines, which someday will naturally succeed to hardwoods. Southern Indiana forests can still go on producing pine sawlogs, railroad ties, staves, and pulpwood. However, hindsight tells us that the real importance of our woodlots, aside from their environmental values, will not be gauged by cubic footage of growth, as with softwood forests,

but by the production of veneer logs and select lumber. What, then, can we do to encourage the production of quality sawlogs that will yield upgraded wood products?

CORRECTING THE PROBLEM

Land-use planning, for one thing, would save some open space for growing trees. Why do we scatter homes all over creation, adding to the problems of gasoline consumption, busing, sewage, trash collection, and so on? Why do federal programs grant low long-term interest loans to build water lines to encourage strip cities and urban sprawl? Shouldn't we save and revitalize our rural areas by using zoning restrictions to establish corridors of open space and by increasing the purchase of land by state and federal forest agencies?

The unique Indiana Classification Law needs implementation. It is interesting to note that the first classification law of 1899 allowed the owner property tax relief on only one-eighth of his acreage. He was permitted to harvest just one-fifth of his trees each year and could pasture livestock after his saplings were 5 inches in diameter.

By 1921 the legislature had learned that a whole woods should be eligible for classification in order to encourage farmers to make a long-term commitment to forestry. They had also learned that farmers should be allowed to cut all mature trees and that farm animals had to be kept out of the woods. Today we need at least a million acres of classified woodland in Indiana. Federal agricultural programs should give priority to classified acreage in the allocation of TSI and conservation funds. In past years, the Agricultural Stabilization and Conservation Service has allocated most federal funds for pasture work, tiling, liming, seeding, ponds, terraces, and so on, and very little for forestry work.

A change in public attitude through intensive environmental educational programs de-

signed to foster a better understanding of multipurpose forestry would eventually help grow more sawlogs. The attitude of the power and pipeline companies is typical of the attitude of many people toward the value of southern Indiana hardwoods. Possessed of the legal right of eminent domain, the companies string their lines and bury their pipes with little concern for soil erosion or the aesthetic effect on the landscape. A festoon of wires across cultivated land is bad enough, but at least the land continues in production.

The utilities pay half as much to the woodland owner because forest land is assessed for less. The owner of the right-of-way is put out of the business of growing trees but must continue paying taxes. The power and pipe line opening also devalues the timber on each side of the easement because of sun and wind damage and, to a large extent, destroys the value of a woodland as a natural retreat. Recent hearings have been held concerning some power line companies' use of Tordon 155, containing over 63 percent 2,4,5-T as a herbicide, banned as a defoliant in Vietnam because of the possibility of damage to human tissue.

The Purdue University School of Forestry should have a larger allocation of funds from their departmental budget for increased research and extension service to small woodlot owners. Part of the problem is that Purdue is in northern Indiana and the trees are in the south. The Indiana Hardwood Association does not have the clout of the Farm Bureau or agribusiness in influencing Purdue's educational programs. An attempt is being made now to construct a forestry camp at the Southern Indiana Forage Farm in Dubois County on the site of the new 9,000-acre Patoka Reservoir. This could develop into a wide-ranging educational and research center that would eventually involve the whole community of wood growers and wood users. Among other problems Purdue might try to deal with is that of giving the tree farmer a better shake in the measurement of board footage of stumpage.

The Doyle rule of measure gives the buyer about a 100 percent overrun on small logs.

The federal and state governments can do several things to encourage the growing of hardwood sawlogs. The creation of a Council on Science and Technology, as recommended by the Indiana Academy of Science, would help the Governor and the legislature anticipate resource dislocations. For example, tax changes to encourage the recycling of paper could eventually ease the demand for small logs and encourage the growth of larger trees. Public forests, which contain about one-half the inventory of saw timber, could be models of management. Foresters should be paid better wages. Congress, in funding new Rural Environmental Conservation Programs, should favor hardwood production of quality sawlogs inasmuch as softwood production is better organized by the paper companies and provides a relatively quick return.

Finally, there is the matter of labor to do the work of timber stand improvement. There



is a pilot grant program for state projects available under the Youth Conservation Act of 1970, which would share 50 percent of the cost of youth camps for Indiana. Indiana has not taken advantage of this opportunity to attack the tremendous backlog of needed TSI work. The Federal Forest Service has a camp at Hardin Ridge, and they are scheduling two more camps in 1974 and 1975. The act states that the projects will provide gainful employment for 15 and 18-year-old males and females from all social, economic, ethnic, and racial backgrounds. The program is designed "to develop an understanding and appreciation of the nation's natural environment and heritage on the part of participating youths." We should have a half dozen of these camps in southern Indiana operating on a year-round basis. Owners of woodlands should have to pay part of the cost of improvement work done in their woods.

It has always been true in the world that sanity is but madness put to good uses. There is an inordinate amount of madness in southern Indiana in having tens of thousands of people employed in woodworking industries, and yet largely ignoring the timber-producing potential of millions of acres of small woodlots. There is a madness in keeping young men and women locked into an educational system without giving them time off to learn practical subjects and in setting wages so high that we create technological unemployment. There is a madness also in having a littered environment or woods that need TSI, while we give priorities to outdated governmental programs. There is a bit of madness in our misuse of woodlots in southern Indiana, which can be corrected if we will but grow a few more large trees.

The 1973 Tax Package: The Effect on Local Schools

DONALD W. KIEFER

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One statehouse fiscal expert remarked late in 1972 that the most crucial aspect of Indiana local school finance policy was not allowing the three people who understood it to fly in the same airplane. That was before the 1973 tax package, and if the structure of Indiana local school finance was complex before 1973, it is doubly so now. The complexity is due to the many separate elements of finance and control involved in the relationship between the state and the local schools.

The 1973 tax package added to both the revenue and control features of local school finance. The tax package established three new revenue distributions from the state to local schools: the basic grant, the supplemental equalization grant, and the supplemental flat grant.

THE BASIC GRANT

An equation is used to determine the amount of the basic grant for each school corporation.¹ This grant is similar in many respects to the previous foundation program grant. The equation has six parts.

1. Copies of the equations, in mathematical form, may be obtained from the author or from the Division of Research, School of Business, Indiana University, Bloomington, IN 47401.

(1) \$445 is multiplied by

(2) the school corporation's 1972 teacher training-and-experience index number. This index is determined by assigning each teacher a number ranging from 0.7 (for less than 4 years of training) to 1.3 (for 17 years or more experience), and computing the average of the numbers for the school corporation. From the result of these calculations is subtracted

(3) the minimum of either (a) a fraction with a numerator of \$2.15 multiplied by each \$100 of current adjusted assessed valuation and with a denominator that is the school corporation's current average daily attendance (ADA) or (b) the same calculation as (a) using adjusted assessed valuation and ADA on January 1, 1973.

Adjusted assessed valuation means the assessed valuation for property tax purposes as adjusted by the State Board of Tax Commissioners pursuant to its annual assessment ratio study, minus the amount of the valuation which consists of property of a railroad or other corporation under bankruptcy proceedings if the corporation is delinquent in payment of its property taxes and is not expected to make any payment on current taxes. The ADA is defined in accordance with rules established by the Commission on General Education of the State Board of Education. The result of these calculations is multiplied by

(4) the maximum of either (a) the school corporation's current ADA, or (b) the school corporation's 1972-73 ADA. This result is multiplied by

(5) the school corporation's final teacher ratio. The final teacher ratio is determined by the State Superintendent of Public Instruction as follows.

First, each school corporation's current training-and-experience index number is divided by its 1972 training-and-experience index number. This result is called the tentative teacher ratio.²

Second, the weighted average tentative teacher ratio for all the school corporations in the state is computed; the weight assigned to each school corporation's tentative teacher ratio in the average is the dollar amount of that school corporation's receipts in 1973 from the state School Foundation program.

Third, all the tentative teacher ratios are multiplied by the inverse of this weighted average to attain the final teacher ratios. The reason for this adjustment is to limit the effect of the teacher ratios on the total amount of money the state gives the local schools through the basic grant. Prior to 1973, a rise in the weighted average teacher training-and-experience index caused the total amount of state money flowing to the local schools to increase. Now, through the adjustments in attaining the final teacher ratios, the schools compete with each other for bigger portions of the basic grant, but the amount of the total

2. Actually, the tentative teacher ratio as defined in the law is what is called the tentative teacher ratio above multiplied by the quotient obtained by dividing the 1972 statewide training-and-experience index number by the current statewide training-and-experience index number where the statewide training-and-experience index number is the average for all teachers in the state. However, this computation is unnecessary because it amounts to merely multiplying all the ratios by a constant, and is nullified in the next computational step which involves multiplying the tentative teacher ratios by the inverse of their weighted average to obtain the final teacher ratios as described below.

state basic grant is not significantly changed. The result of these calculations is multiplied by

(6) a fraction with a numerator that is the minimum of either (a) \$2.15 or (b) the school corporation's current general fund tax rate and with a denominator of \$2.15.

The result of all these computations is this: Essentially, the basic grant is intended to give each school corporation, for every student in average daily attendance, \$445 minus the amount of money per pupil which would be raised by a \$2.15 per \$100 assessed valuation tax rate. (School corporations with assessed valuation per ADA in excess of \$20,698 get nothing, because a \$2.15 tax rate raises more than \$445 per ADA.) The amount is adjusted to reflect the training and experience of the school corporation's teachers in 1972 and the change relative to other school corporations since then.

The amount of the basic grant received by a school corporation does not decrease if its ADA decreases or its assessed valuation increases, but the grant does increase if the school corporation's ADA increases or its assessed valuation decreases. To receive the full basic grant, the school corporation must levy at least a \$2.15 tax rate; if a rate less than \$2.15 is levied, the amount of the basic grant is proportionately reduced. This grant essentially guarantees at least \$445 of revenue per ADA in school corporations willing to levy a \$2.15 tax rate.

SUPPLEMENTAL EQUALIZATION GRANT

The supplemental equalization grant applies in addition to the basic grant. Its purpose is to somewhat equalize the spending power of school corporations by giving additional state aid to relatively poor areas. It is calculated as follows.

(1) \$230 is multiplied by

(2) the school corporation's current ADA. From this result is subtracted

(3) \$2.80 multiplied by each \$100 of the school corporation's adjusted assessed valuation. This result is multiplied by

(4) a fraction with a numerator that is the school corporation's 1973 general fund tax rate minus \$2.15, and a denominator of \$2.80.

This grant is intended to give each school corporation, for each student in average daily attendance, \$230 minus the amount of money raised by a \$2.80 per \$100 assessed valuation tax rate (school corporations with assessed valuation per ADA in excess of \$8,214 get nothing because a \$2.15 tax rate raises more than \$230 per ADA). To receive the full supplemental equalization grant, a school corporation must levy at least a \$4.95 (\$2.80 plus \$2.15) tax rate; if a tax rate less than \$4.95 is levied, the amount of the supplemental equalization grant is reduced proportionately so that the grant will equal zero at the \$2.15 tax rate. This grant, in conjunction with the basic grant, essentially guarantees at least \$775 of revenue per ADA in school corporations willing to levy a \$4.95 tax rate.

The tax rates used in computing the amounts of the basic grant and supplemental equalization grant are to be the tax rates prior to the application of any property tax replacement credits. Both the basic grant and the supplemental equalization grant must be used by the school corporation for general fund purposes.

THE SUPPLEMENTAL FLAT GRANT

The supplemental flat grant applies in addition to the basic grant and the supplemental equalization grant. Whereas not all school corporations will receive the basic grant and the supplemental equalization grant (because of high assessed valuation per ADA), all school corporations will receive the supplemental flat grant. Its purpose is to finance the necessary annual expenditure increases in the local schools. The supplemental flat grant will give to

each school corporation in 1974 the sum of \$36 multiplied by the number of students in average daily membership (ADM), and in 1975 each school corporation will receive \$74 multiplied by the ADM. ADM means the actual number of students enrolled (kindergarten pupils count as one-half) in the school corporation on a day designated by the Commission on General Education.

The money to be distributed to the school corporations as part of the basic grant, supplemental equalization grant, and supplemental flat grant is to be distributed in four equal installments to be paid in January, April, July, and October of each year. These three grants replace and add to the previous foundation program distribution from the state to local school corporations. However, all other state distributions to the local schools—including grants for summer and evening school programs, the transportation distribution, the \$40 ADA flat grant provided in the state budget, tuition transfer funds, and vocational education grants—are unaffected.

THE TAX PACKAGE CONTROLS

The new control elements of school finance which were added by the 1973 tax package are, like the revenue features, simple in concept but complex in implementation. The basic concept of the school control provisions in the tax package is that, with the exceptions explained below, no school corporation may impose an "excessive tax levy" for its general fund. An excessive tax levy is defined as one which exceeds in dollar amount the result of an equation with five parts.

(1) From the "base tax levy," which with certain exceptions noted below is equal to the 1973 general fund ad valorem property tax levy, is subtracted

(2) the current state basic grant (described previously) minus the amount of the 1973

foundation program grant. However, this amount shall be subtracted only if it is a positive amount and if the increase in the basic grant is due to a decrease in the school corporation's adjusted assessed valuation. To the resulting amount is added

(3) the amount of a school corporation's decrease in cash balances from December 31, 1972 to December 31, 1973, reduced by the extent to which such cash balances were drawn down by emergency appropriations, additional appropriations, or advance payments. However, this amount shall be added only if it is a positive amount. To the resulting amount is added

(4) the minimum of either (a) the amount by which federal aid to impacted areas received by the school corporation has been reduced from the amount received in 1973, or (b) the amount of the school corporation's 1973 general fund revenue plus the current state supplemental flat grant (as described above, \$36 per ADM in 1974, and \$74 per ADM in 1975) minus the school corporation's total anticipated general fund revenue. However, this amount shall be added only if the amount of federal aid to impacted areas received by the school corporation has been reduced since 1973. The resulting amount is multiplied by

(5) the school corporation's ADA ratio which is equal to the greater of either (a) one or (b) the school corporation's current ADA divided by its 1973 ADA.

Despite the complexity of the equation, the basic concept of the tax control is simple. Ignoring the adjustments in steps 2 through 4, school corporations are allowed to raise for their general fund from the property tax what they raised in 1973, increased by the percentage growth in ADA (but not reduced if ADA has decreased). The allowable tax levy is reduced if the school corporation has received an increased state basic grant due to a reduction in assessed valuation. This provision guarantees the state basic grant, when increased due to

reduced assessed valuation, will operate to offset the otherwise necessary tax rate increase. The allowable levy is increased if the school corporation partially funded normal general fund expenditures in 1973 by diminishing cash balances. And the allowable tax levy is increased to compensate for reduced federal aid to impacted areas.

BUDGET APPEALS

Under the 1973 tax package, no school corporation has the power to adopt or advertise an excessive tax levy. It is the duty of the County Tax Boards and county auditors to enforce this prohibition at the local level. Enforcing the prohibition at the state level and administering the allowable exceptions to the limit is the duty of the State Board of Tax Commissioners (State Tax Board) upon the recommendation of the newly created School Property Tax Control Board (School Control Board). The School Control Board consists of five members, three of whom are appointed by the Governor, and one each by the State Board of Accounts and the State Tax Board. One state senator and one state representative serve as nonvoting ex officio members.

The purpose of the School Control Board is to receive appeals from local school corporations to levy a tax in excess of that approved by the County Tax Board or county auditor. Such appeals fall into two categories: emergency and nonemergency. An emergency appeal is one in which the school corporation alleges that unless it is relieved from the controls described above "it will be unable to carry out, in its ensuing budget year, the public educational duty committed to it by law." A nonemergency appeal seeks a higher tax levy than approved by the County Tax Board or county auditor but does not seek relief from the new controls established by the 1973 tax package.

The powers of the School Control Board,

which recommends action, and the State Tax Board, which makes the final determination, differ for the two types of appeal. In response to a nonemergency appeal, the School Control Board may recommend either approval of the levy ordered by the County Tax Board or the county auditor, or disapproval of the order of the County Tax Board or county auditor and a specified increase or decrease in the school corporation's tax levy. For nonemergency appeals, however, no tax levy may be approved which would be an excessive tax levy or which would necessitate a tax rate or levy in excess of that initially adopted and advertised by the appellant school corporation.

In response to an emergency appeal, the School Control Board may exercise the same powers it has in regard to a nonemergency appeal, subject to the same constraints, or, if the board finds the allegations of the emergency appeal valid, it may recommend one of the following emergency financial relief actions:

Make a loan or grant from any state funds available for such purpose.

Grant the school corporation permission to engage in long-term borrowing from a source other than the state.

Grant the school corporation an advance of any state funds that will become payable to the school corporation.

Grant the school corporation permission to cancel any unpaid obligation of its general fund to its cumulative building fund or use, for general fund purposes, any unobligated balance in or tax levy for its cumulative building fund.

Grant the school corporation permission to use, for general fund purposes, any unobligated balance in any construction fund including the proceeds of general obligation bonds.

A combination of the above actions.

In addition to these actions, the School Control Board may recommend and the State Tax Board may allow a school corporation to impose an excessive tax levy in two circumstances. If a school corporation has been granted a loan or advance of state funds, the school corporation may be authorized, for a

specified budget year and solely for the purpose of making repayment, to impose an excessive tax levy. However, this authorization may be granted in no more than one of any four consecutive budget years. The second circumstance in which an excessive tax levy may be authorized is if a majority of the voters in the school corporation approve such a tax levy in a referendum to be held within sixty days after School Control Board certification. Unless the referendum question precludes it, the excessive tax levy imposed pursuant to a majority vote in a referendum will become the base tax levy for the school corporation for future budget years.

Any school corporation that receives emergency financial relief comes under the control of the School Control Board and the State Tax Board for the years in which emergency relief is received. During this period, the school corporation must secure the recommendation of the School Control Board and the authorization of the State Tax Board before it may acquire real estate for school building purposes, construct or remodel school buildings, make any lease or incur any other contractual obligation (except for replacement hiring) involving an annual outlay exceeding \$10,000, purchase personal property exceeding \$10,000, or adopt or advertise a budget, tax levy, or tax rate.

The tax package also imposes controls on cumulative building funds of the school corporations. Each school corporation is prohibited from levying a cumulative building fund tax rate higher than it levied in 1973. In addition, approval of the School Control Board and the State Tax Board must be obtained prior to establishing such a fund or increasing its tax rate. The Tax Control Board is also given the responsibility of reviewing the schoolhouse occupancy program of each school corporation at least every five years and reducing or terminating unnecessary cumulative building fund tax levies.

EDITOR'S NOTE: This article is the fourth in a series summarizing various aspects of the tax package passed by the 1973 Indiana General Assembly.

Black Capitalism in Indianapolis

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The purpose of this article is to summarize the findings of the most complete survey to date of black-owned Indianapolis firms. This survey was originally undertaken as a compilation of black-owned businesses for inclusion in the *Black Business Directory* of Indianapolis, published in mid-1973. These businesses (as indicated on the map) are located primarily in the central section of the city, where the black population of Indianapolis is most heavily concentrated, although a few black-owned firms can be found scattered throughout the city.

The information contained in the 766 questionnaires which were returned by black businessmen will enable us to initially portray the "typical" black business of Indianapolis. Using information obtained from the directory itself, we may examine the areas of business in which blacks are (and perhaps more significantly, are not) concentrated and compare the figures derived with 1969 figures (the latest available in *Minority-Owned Businesses: 1969*¹) for all white- and black-owned firms in the United States.

THE "TYPICAL" BLACK BUSINESS

On the basis of information gleaned from the 766 *Black Business Directory* questionnaires, we may describe the representative black business of Indianapolis as a small, service-oriented

business organized as a sole proprietorship and owned by a male over thirty years of age. Further, this business probably employs four workers and has average receipts of fewer than \$25,000 per year. For a more complete picture, we may examine each of these aspects more thoroughly.

Form of organization—The vast majority of businesses listed in the *Directory* are either sole proprietorships or, to a lesser extent, partnerships: 86 percent of the 766 businesses listed fall into one of these categories, while the remaining 14 percent have adopted the corporate form of organization. This latter figure is much higher than the corresponding figure for black-owned firms nationally: 97.9 percent of the 163,073 black-owned businesses in the United States in 1969 (representing 2.2 percent of all businesses) were either sole proprietorships or partnerships. A scant 2.1 percent of these firms were incorporated.

Sex of owner—About three-quarters of the 796 owners of businesses listed in the *Directory* are male, while the remaining 25 percent are female. Although the latter figure is much higher than the 3.5 percent figure suggested by Fabian Linden for women nationally who were self-employed proprietors in 1971 (2 percent white and 1.5 percent black),² it should be noted that the overwhelming majority of these Indianapolis black female-owned businesses are service-oriented, such as beauty shops.

1. U.S. Bureau of the Census, *Minority-Owned Businesses: 1969*, MB-1 (Washington: U.S. Gov't Printing Office, 1971).

2. Fabian Linden, *Women: A Demographic, Social and Economic Presentation* (New York: Conference Board, 1973), pp. 36-37.

Business volume—Only 285 owners of black businesses (37 percent of the total) chose to respond to the question pertaining to the annual sales volume of their firms. The results, however, are interesting since they tend to perpetuate the stereotype of the black-owned business as a small, “Mom and Pop” type of operation. Of these 285 owners, just over half (51 percent) reported business volumes of fewer than \$25,000, while 17 percent reported between \$25,000 and \$50,000; 19 percent reported between \$50,000 and \$100,000; 12 percent reported between \$100,000 and \$600,000; and less than 1 percent of the owners reported business volumes in excess of \$600,000.

These scattered returns indicate that the majority of the black-owned businesses in Indianapolis have annual business volumes below \$25,000. For the nation as a whole in 1969 black-owned firms had average receipts of about \$27,500, compared to an average of \$208,000 for white-owned firms.

Age of owners—The vast majority of the owners of businesses listed in the *Directory* are over thirty years of age: only 10 percent of the 599 owners responding to the question are less than thirty. Of the respondents, 33 percent are between thirty and forty; 31 percent are between forty and fifty; and 26 percent are over fifty years of age.

Number of employees—On the basis of answers supplied by 589 owners, we might conclude that owners of businesses listed in the *Directory* have an average of five employees working for them. If we eliminate from consideration those nineteen businesses which may be considered atypical in the sense that they employ twenty or more workers, it emerges that the typical small black business in Indianapolis employs only four workers. This is the 1969 national average for the 38,304 black-owned firms that had paid employees.

These nineteen businesses, however, representing only about 2.5 percent of the businesses listed in the directory, nonetheless employ 665 workers (an average of thirty-five per firm) or 23 percent of the total number of employees.

SIC BREAKDOWN

Using information obtained from the “Categorized Listing” section of the *Black Business Directory*, we may utilize the short Standard Industrial Classification (SIC) system to organize and analyze the areas in which black businessmen are (and are not) concentrated. The SIC system, prepared by the Office of Management and Budget of the federal government, embraces eleven categories. No black-owned firms are involved in mining or public administration; there are none that could not be classified; and only one firm (a veterinary clinic) is tangentially involved in the area of agriculture, forestry, and fishing. Thus, we may initially present a brief overview, followed by a more extensive analysis of the seven major areas in which Indianapolis black businessmen operate.

The 874 firms listed in the *Directory*, including eight firms named under more than one SIC heading, fall accordingly under seven major SIC headings (see Table 1). We shall now turn to a more extensive analysis of these seven major areas in which black businessmen listed in the *Directory* operate.

Services—Almost half (48 percent) of the Indianapolis black businesses listed are concentrated in this particular sector. Within this broad grouping, just less than half (46 percent) of the owners of black businesses are involved in personal services, such as barber shops, beauty parlors, and cleaning establishments. Another 16 percent are involved in business services of various kinds.

These two kinds of services, comprising almost two-thirds of the services offered by blacks and about 30 percent of all the black businesses listed, are followed closely by firms involved in health services, repair services, and legal services. For the nation as a whole in 1969 there were 56,077 black-owned firms (3.1 percent of all firms and 34.4 percent of all black-owned firms) and approximately 1,700,000 white-owned firms (23.8 percent of the total number of white businesses) involved in the provision of services to customers.

TABLE 1

SIC Categories

<i>Categories of Firms</i>	<i>Number of Firms</i>	<i>Percent of Firms</i>
Services	420	48.0
Retail trade	296	33.9
Construction	67	7.7
Finance, insurance and real estate	32	3.7
Manufacturing	28	3.2
Wholesale trade	16	1.8
Transportation and public utilities	14	1.6

Retail trade—A total of 296 black-owned firms listed in the directory are involved in retail trade, about one-third (33.9 percent) of those listed in Indianapolis. (Nationally, the figure for black-owned firms is 27.7 percent; for white-owned firms, 27.2 percent.) About one-quarter of the black-owned firms in this area are eating and drinking places, while another one-third are enterprises classified under the SIC system as miscellaneous—record shops, liquor stores, florists, and so on.

Construction—The sixty-seven black-owned firms involved in the construction industry represent just less than 8 percent of the 874 firms listed in the *Black Business Directory*. (Nationally, 10 percent of all black-owned firms and 11.5 percent of all white-owned firms are in this particular industry.) Of these sixty-seven firms, 64 percent are special trade contractors, 31 percent are general building contractors, and 5 percent are heavy construction contractors. After the areas of services, retail trade, and construction, which comprise almost 90 percent of the black-owned firms listed in the *Directory*, the number of firms involved in other areas drops off sharply.

Finance, insurance, and real estate—Of the thirty-two firms in these three fields, there are seven firms in the insurance field, two firms in finance (one bank and one credit union), and twenty-three firms directly involved in real estate. For the nation as a whole, 4.7 percent of black-owned firms and a full 16.7 percent of white-owned firms are involved in these three areas.

Manufacturing—There are only twenty-eight firms engaged in manufacturing (a mere 3.2 percent of the 874 firms listed in the directory), and most of these are engaged in light manufacturing, such as printing and publishing and the manufacture of cosmetics and jewelry. This figure compares favorably with the 1.8 percent figure for black-owned firms nationally, although not so favorably with the 5.5 percent figure for white-owned firms.

Wholesale trade—Representing less than 2 percent of the firms listed in the *Directory*, the sixteen firms involved in wholesale trade can be subdivided into six firms dealing with durable goods (beauty shop equipment and so on) and ten dealing with nondurable goods (beer, hosiery, clothing, salt, and wigs). Nationally, only 1 percent of black-owned firms and 6 percent of white-owned firms are engaged in wholesale trade.

Transportation and public utilities—The fourteen firms which operate in these areas and which comprise fewer than 2 percent of the firms listed are involved in transportation (trucking and warehousing, sanitary services, charter and rental busing, and so on). This 2 percent figure is significantly below the 10.3 percent figure for black-owned firms nationally and the 4.7 percent figure for white-owned firms across the nation.

AN ASSESSMENT

Thus we have seen that of the 874 firms listed in the *Black Business Directory*, 716, or 82 percent of them, are involved in services and retail trade. When combined with the black-owned firms involved in construction, these three areas account, as previously noted, for almost 90 percent of the firms listed in the directory. This figure is substantially higher than the comparable figures for white- and black-owned firms nationally: 72.1 percent of black-owned firms and 62.5 percent of white-owned firms were involved in these three areas in 1969.

We may utilize Table 2 to attempt a

TABLE 2

Comparison of Concentration of White and Black Business

<i>Categories of Firms</i>	<i>Black-Owned (Nationally) Percent</i>	<i>Black-Owned (Indianapolis) Percent</i>	<i>White-Owned (Nationally) Percent</i>
Services	34.4	48.0	23.8
Retail trade	27.7	33.9	27.2
Transportation	10.3	1.6	4.7
Construction	10.0	7.7	11.5
Finance, insurance, and real estate	4.7	3.7	16.7
Manufacturing	1.8	3.2	5.5
Agriculture, forestry, and fishing	1.8	0.1	—*
Wholesale trade	1.0	1.8	6.0

*The specific figure for "agriculture, forestry, and fishing" could not be ascertained.

comparison of black-owned firms in Indianapolis vis-a-vis white- and black-owned firms nationally. These figures are not strictly comparable, since the industrial breakdown of the black businesses of Indianapolis (a metropolitan area) is being compared to a breakdown of national figures for black and white businesses. This latter breakdown includes not only those businesses found primarily in metropolitan areas (finance, insurance and real estate, for example) but also those businesses which are peculiar to a more rural location (such as agriculture, forestry, and fishing) and which are consequently not reflected in the statistics derived from the *Black Business Directory*. Despite the fact that the figures for black-owned Indianapolis businesses do not include businesses of a rural nature, such a comparison is useful; it portrays a reasonably accurate comparison of Indianapolis black businesses with black and white firms in the United States.

Table 2 reveals that a greater proportion of black-owned firms in Indianapolis than black-owned firms nationally are involved in manufacturing (3.2 percent vs. 1.8 percent); wholesale trade (1.8 vs. 1.0); retail trade (33.9 vs. 27.7); and services (48.0 vs. 34.4). A lesser percentage of Indianapolis black-owned firms are involved in agriculture, forestry, and fishing (0.1 vs. 1.8); construction (7.7 vs. 10.7); transportation and public utilities (1.6 vs. 10.3); and finance, insurance and real estate

(3.7 vs. 4.7). A greater proportion of white-owned firms in the United States than black-owned firms in Indianapolis are involved in each of these industries except services and retail trade.

As is clearly evident from Table 2, the areas of business in which most Indianapolis black businessmen are concentrated are similar to the areas in which black businessmen as a whole are concentrated. In fact, the only significant deviation between the two samples is in the area of transportation, where 10.3 percent of blacks nationally and only 1.6 percent of black businessmen in Indianapolis are operating. There are, however, rather substantial differences in the actual percentages involved in the various industries, as previously noted.

In addition to significant differences in the percentages of black- and white-owned firms involved in each of the eight industries under consideration, there are also substantial differences in the areas of concentration between black-owned firms in Indianapolis and white-owned firms nationally. White-owned firms engage to the greatest extent in retail trade, followed closely by services, finance, insurance and real estate, construction, and wholesale trade. The percentages involved in each of these industries are spread more evenly, with less "bunching up" of firms in particular industries, as is the case with black businesses in Indianapolis as well as across the nation.



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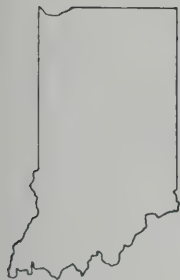
Indiana Business Review

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To the Readers of the <i>Indiana Business Review</i>	1
ZPG: Prospects and Problems <i>Robert C. Turner</i>	2
The RPA of the Middle Eighties <i>George F. Bloom</i>	6
The 1973 Tax Package: Effect on Real Estate and Real Estate Industry <i>Donald W. Kiefer</i>	10
The Tax Derby <i>Morton J. Marcus</i>	12
Higher Energy Costs—Implications for Location Patterns and Land Use <i>R. L. Pfister and Bruce L. Jaffee</i>	14
The Sales Meeting—Two Views The Academician— <i>P. Ronald Stephenson</i> The Practitioner— <i>Maurice C. Martindale</i>	17 22



Indiana Business Review

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MARCH-APRIL 1974

TO THE READERS OF THE INDIANA BUSINESS REVIEW

Our readers will note two major changes in this issue of the *Indiana Business Review*. One is obvious; our new cover emphasizes our Indiana orientation. The second change deals with content. The reader will find that this issue focuses on one major component of business life in Indiana—the business of real estate sales. All articles in this issue are directly related to the real estate business—sales, appraisal, management, and so on. We are pleased to cooperate with the Indiana University Real Estate Certification Programs (IRECP) and the Indiana Real Estate Commission in publishing and distributing this issue.

IRECP is a department of the Division of Continuing Education. Stephen J. Martin is director of the department, and Robert W. Richey is dean of the division. Among other programs, IRECP administers the Approved Real Estate Salesman's Course, a study program which all aspiring real estate salesmen in Indiana must successfully complete before they may sit for the salesman's licensing examination. Last year, more than 3,500 students enrolled in the course, which was taught at several locations in the state of Indiana.

The Indiana Real Estate Commission, which is located in the State Office Building, Indianapolis, is administered by an executive secretary operating under the direction of the thirteen commissioners representing the various regions of the state. The commission has two major functions. First, it licenses all real estate salesmen and real estate brokers. In addition to successfully completing the salesman's course, each aspiring salesman must sit for and satisfactorily complete a licensing examination. The license allows the salesman to sell real estate only if he is officially sponsored by a real estate broker. A salesman may upgrade his license to that of a broker by serving successfully as a salesman for two years and by sitting for and successfully completing the broker's examination. The commission's second major function is to regulate the activities of all licensees in order to maintain the highest ethical standards of practice. There are approximately 27,000 licensed real estate salesmen and brokers in Indiana.

The Indiana professional organization representing real estate salesmen and brokers is known as the Indiana Association of Realtors. On the national level, it is known as the National Association of Realtors; on the local level, salesmen and brokers are represented in Indiana by sixty-three city boards of realtors.

The business of real estate sales is an important aspect of the Indiana economy, and we are pleased to recognize its importance with this special issue of the *Review*. The forthcoming May-June issue will contain the midyear national and state economic outlook. In addition, an outlook will be presented for a number of the Indiana economic regions.

THE EDITORS

ZPG: Prospects and Problems

ROBERT C. TURNER

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EDITORS' NOTE: The following is adapted from the author's article in the November-December issue of *MGIC Newsletter*.

One of the most widely advertised statistical events of recent years is the dramatic decline in the fertility rate in the United States. The estimated fertility rate dropped from 3.7 in 1960 to 2.4 in 1970 and to 2.025 in 1972.* Preliminary data indicate that in 1973 the rate was below 2.0. The replacement level, assuming

*The most widely cited population statistic is the birth rate, the number of children born in any given year per thousand of total population. For some purposes, a better measure is the fertility rate, which relates the number of babies born to the number of females of child-bearing age. This rate can be shown in two ways. One is the number of babies born in a given year per thousand females of child-bearing age, defined arbitrarily as 15 to 45. The other is the average number of babies that each female will bear in her lifetime if, at each year of age, she bears as many babies as were born, on the average, to women of those ages during the given year.

recent mortality experience and no net immigration, is about 2.11. That is, each female should produce during her child-bearing years an average of 2.11 children to replace her own generation and to allow for deaths of children prior to maturity.

Does the fact that the fertility rate has recently been below the replacement level mean that zero population growth (ZPG) is imminent? The answer has implications for all segments of business—including real estate. The demand for homes and land is directly affected by the rate of population growth.

TO THE MID-EIGHTIES

First, it should be emphasized that literal ZPG is probably a long way off. The reason lies in the abnormality of our present age distribution. The "baby wave" of 1946 through the early

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1960s produced a bulge in the population pipeline that is now only partly through this child-bearing age range. Although the Census Bureau defines the fertile age range as 15 to 45, most babies are born to women 18 through 34 years of age. The 1946 crop of babies is only halfway through the prime child-bearing age range. The babies of the last half of the 1950s are just now beginning to arrive at this age range. Between 1972 and 1980, the number of females 20 through 34 years of age will increase by 23 percent.

Further, although the fertility rate declined in the 1960s, the number of births remained relatively large for several years after the 1961 peak. Babies born in the first half of the 1960s will be in the primary child-bearing age range until well into the 1990s.

Conceivably (no pun intended), ZPG could be reached as early as 1990, but the proportion of the total population in the child-bearing age range between now and 1990 will continue to be so large as to make this extremely unlikely. The fertility rate decline would need to be more abrupt than anything we have seen yet to yield such a result. Further, the trend of the fertility rate could reverse itself again.

Predicting trends in the fertility rate is risky business. Decades ago there was some evidence that economic conditions were a significant determinant of the fertility rate, low fertility being associated with depressions. This no longer, however, appears to be the case; indeed, the sharp decline in the 1960s occurred during a period of strongly rising income, suggesting an inverse correlation. It is more probable that the standard of living now enjoyed by the vast majority of Americans is sufficiently above minimum levels that the fertility rate is unaffected by fluctuations in economic activity.

It is also widely assumed that knowledge and availability of birth control methods are important determinants of fertility. Most demographers conclude, however, that although the availability of contraceptive techniques and

abortions plays an important facilitative role, the fundamental determinants in the United States today are prevailing attitudes toward sex, the character of marriage relationship, and the number of children wanted or felt to be socially appropriate. These attitudes have changed unpredictably in the past and may do so again in the future.

For present purposes, we are assuming that the recent downward trend in the fertility rate will continue for a few more years but that it will level off at about 1.8 children per woman. If this happens, and assuming recent mortality rates and a continuation of the recent level of net immigration, the United States will see a continued growth in total population of about 1 percent a year, perhaps slightly less, until the mid-1980s, followed by a declining rate of growth to less than one-half of 1 percent in the closing years of the century. Not until 2030, or perhaps a decade or so later, however, will absolute ZPG be reached.

It should be noted that the decline in the rate of total population growth will not be matched in the next decade by an equal decline in the rate of growth of the labor force. The same baby wave that is arriving at child-bearing age is also reaching working age. Further, if the fertility rate remains low and average family size declines, the recent upward spurt in female participation in the labor force will be accelerated by the increasing freedom of women to take employment outside the home. The Bureau of the Census projects a rate of increase in the labor force between 1970 and 1980 only slightly below that of the 1960s, and no marked slowdown until after 1985. Similarly, the rate of new household formation will remain relatively high until the baby wave passes through the marrying age—in another ten years or so.

For the remainder of this decade, the economic consequences of the decline in fertility rate will be confined largely to those having their origin, not in a leveling of total population, but in a change in the age composition of

the population, chiefly a declining number and proportion of children (including teenagers). Some economic consequences, of course, have already occurred, including the declining demand for school teachers, school books, and school building construction, and a fall-off in business for pediatricians and maternity wards.

The demand for the goods and services needed by young adults, however, should continue to be strong until after 1980. These include housing, automobiles, furniture, appliances, and the like. The housing units demanded are likely to be the smaller units needed by families with fewer children, and apartments in or near urban areas are likely to be more in demand than houses in the suburbs.

Indeed, it is quite possible that the combination of decreasing family size and increasing incomes may yield a substantial demand for second houses, a cottage in the country or on the beach supplementing an apartment in the city. Because of smaller families—and the availability and cost of gasoline—automobiles are likely to be smaller, and the station wagon may soon be a relic of the past. Two-car households are likely to become even more common than now, as increasingly mobile women demand their own cars.

AFTER 1985

Beyond 1985, however, the population picture changes. Even though absolute ZPG will probably not be reached until long after 1985, a population growth rate declining to less than one-half of 1 percent, in which most of the increase is in age brackets 35 or 40 years and over, and in which there is an absolute decrease in the number of young adults, may have profound economic effects. The effects may not differ greatly from those of ZPG.

For years—indeed, centuries—economists have speculated about the characteristics of a static economy. Even Adam Smith tried his hand at it; his conclusion was that a no-growth society would be dull. Only once in modern

history have we had a quite low rate of population growth. That was during the 1930s, and some economists, notably Alvin Hansen, attributed the malignant depression of that decade to “secular stagnation.” Hansen argued that the Great Depression was not simply a short-run, cyclical phenomenon, but a long-run, secular problem attributable to a chronic shortage of investment opportunities into which saved funds could be channeled.

The origins of secular stagnation did include more than a low rate of population growth. They also included the disappearance of the Western frontier, a low rate of technological innovation, and the absence, before 1939, of the stimulus of war, artificial and temporary as it may be. But the foundation stone of the secular stagnation thesis was a low and widely forecasted zero rate of population growth. The fact that subsequent population events upset the premises on which the secular stagnation argument was based does not necessarily destroy its logic.

Implications for Capital—The most obvious consequence of a low rate of population growth is in the demand for new capital. In recent decades, a substantial proportion of new capital formation can be attributed directly to population growth. Well over a third, perhaps more than half, of new housing construction has been simply to meet the needs of an expanding population. In the case of automobile manufacturing facilities, the percentage attributable to population growth is lower, because replacement demand for automobiles is a larger percentage of total demand than it is for houses, and the growth of second (and third) car ownership has been much faster than the growth of second-house ownership. In many other industries such as electric power, clothing manufacture, agriculture, home appliances and furniture, education, banking and finance, and retail distribution, a significant portion of the need for new capital has been just to keep even with a growing population.

The moral of the story is simply that a low

rate of population growth, *other things being equal*, means that we will need less capital formation of nearly all types, though the degree of reduction will vary from industry to industry. I say "other things being equal" because it is possible that an acceleration in capital intensification of industry could offset the population effect. Nuclear power plants, for example, are much more capital intensive than those using fossil fuels. Automated manufacture is capital intensive. On the other hand, the most rapidly growing industries now and in the future are the service industries, which in general are not capital intensive. Indeed, the shift in consumer demand from goods to services may accentuate the population effect.

Capital formation ultimately is funded by saving: personal, business, or government. A decline in capital formation, in addition to having an obvious direct effect on sales, profits, and employment in capital goods industries, will reduce the need for saving. This reduction will occur just at the time when an increase in saving could be expected.

Persons in their twenties and thirties typically save very little. Instead, they often "dis-save," that is, go into debt for new houses, cars, and so on. At the other end of the age range—after retirement, of course—people also save relatively little. The bulk of personal saving is done by the middle-aged and upper middle-aged groups. During the 1970s, the bulge in the population pipeline will be the low-saving age range. In the late 1980s and 1990s, however, the bulge will move into the high-saving age range, and the group moving into the low-saving age range will be the lean baby crop of the late 1960s and 1970s.

A chronic reduction in investment opportunities (capital formation) accompanied by a tendency toward a sustained or increased flow of saving seeking an investment outlet, other things being equal, can mean only one thing: a tendency toward repressed economic conditions, high unemployment, and reduced corporate profits. Such a tendency can occur, it should be noted, even in an economy in which

rising output per man-hour and some further rise in the labor force yield continued economic growth. That is, a saving-investment disequilibrium can yield a tendency toward under-capacity utilization of resources, human and material, without stopping growth completely.

Let me emphasize that this is only a tendency. As we observed earlier, population growth accounts for only a portion of the demand for capital. The demand for capital goods to meet replacement needs and increased output per capita will continue to be substantial. Unless resource limitations put a stop to further economic growth per capita, activity in capital goods industries will not decline drastically. And even if there should be a marked slowdown in the rate of per capita output, a growing need for modernization of plant and equipment for pollution control will sustain the demand for capital.

There are also abundant opportunities for public capital formation, such as renovation of cities and improvement in housing of low-income groups. The tendency toward a reduced demand for capital, however, is a reversal of tendencies in the recent past. We will swing, not from balance to minus, but from plus to minus. It is, therefore, a tendency to be concerned about.

What can we do to offset this tendency? A number of possibilities suggest themselves. We might reenact the undistributed profits tax of the 1930s to reduce business saving. That this tax did not work well in the 1930s does not necessarily mean that it would not work well in the 1980s. We might increase government deficits to siphon surplus saved funds out of the money markets, perhaps accompanied by increased government capital formation (parks, highways, sewage systems, pollution abate-ments, and so on). As a different approach, we might persuade people to take the rewards of rising productivity increasingly in the form of leisure rather than money income, thus reducing saving: reduce workweeks to 35 or 30 hours; drop the social security retirement age to 60; discourage overtime work and moon-

lighting; and increase the number and length of vacations.

Some of these actions would be welcome; others would be unpalatable but not impossible. My own guess is that some combination of policies can be developed that will be politically acceptable and will permit economic equilibrium at relatively high levels of employment.

Increased Friction—A slow rate of population growth will have other economic effects of a quite different character. Adam Smith said that a stationary state would be dull. It would be more than that; it might be a source of increased economic friction. Advancement, and thus the satisfaction of achievement, is easier in an expanding business enterprise than in a static one. The employment of youngsters, the relatively unskilled, blacks, and others who are discriminated against is easier in a vigorously expanding economy.

To be sure, there are some offsetting gains. The tensions that often accompany population congestion, especially in urban areas, would be lessened by a slower rate of population growth.

The problems of zoning boards would be greatly reduced. On balance, however, we are going to have to devise methods of resolving increased friction and of providing people with the psychic income that they formerly got simply from living in a growing society.

IN SUMMARY, the recent decline in the fertility rate, if it continues as we have postulated, is not likely to have significant economic consequences for another ten years or so, except in occupations and industries catering primarily to children. After the mid-1980s, however, as the "missing generation" of the 1960s and 1970s moves into the adult age ranges, economic problems resembling those of ZPG are likely to begin to appear. They are not insurmountable problems. Rapid population growth is not a prerequisite to full-employment economic expansion. And conversely, there are some obvious advantages, in terms of raw material shortages and environmental pollution, to a near-zero rate of population growth. But the problems are real, and solutions will have to be found. We have only a decade or so to work out the answers.

The RPA of the Middle Eighties

GEORGE F. BLOOM

*Professor of Real Estate Administration
and Real Estate Director, Indiana University, Bloomington*

By the mid-eighties, changes in the real estate environment may produce what I shall call the RPA—the real property analyst. It is a title that best describes the type of professional who will be making what we now call "real estate appraisals." The RPA will be an established professional person, recognized as such by the

public and accepted on a par with CPAs, CLUs, CPCUs, architects, and engineers. (I have intentionally left out doctors, lawyers, and ministers because I think it is unrealistic to assume that RPAs could reach the level of these professionals within a decade—although they may some day.)

“Real property” is used in the title because it is more inclusive than “real estate,” which currently refers only to physical aspects—the land and buildings. The RPA will be involved in much more. He will be concerned with all or parts of the rights thereto, as well as with the analysis of other intangibles. The term “analyst” was chosen because the RPA will be more than an appraiser. While he will still make appraisals of real estate interests, he will be involved in many more processes, and his entire scope of service will be broadened.

Staff and Services

Who can be an RPA? Certainly the leaders in the appraisal field today will be qualified for this designation, but the opportunities in the profession will attract many exceptionally qualified younger persons, including women. The newcomers will be college graduates, some with a master’s degree in business with a specialty in real estate analysis.

Others will have completed a baccalaureate program in allied real estate areas. These young dynamic analysts will have a professional attitude and approach. They will dominate the development and control of the professional organization. They will be alert to the changes in society, the economy, and government that have measurable impact on real property. All will continue to keep their education current by attending regional seminars and reading periodicals in the field and allied areas.

The RPA’s office staff will tend to be larger than that of the appraiser of the seventies. It will include not only a number of highly qualified RPAs, but research, technical, and secretarial personnel. Many assignments contracted for by the firm will involve research, requiring the skills of highly qualified persons.

In addition, each office will employ interns (their number depending on the size of the firm) who will be required to gain experience over a probationary period of several years before attaining RPA status. The firm’s size and

capital resources will be large enough to support the intern system. The internships will be supervised by both the state organization and the national professional group. The major firms in the country will cooperate in the program so that persons who have completed their education can move directly into a highly controlled internship for several years.

After educational and intern requirements have been met, a person may apply for admission to the profession. Licensing will be controlled by the states. A standard license law will be adopted which will, of course, permit unlimited reciprocity among states. Inasmuch as many of the offices will provide service in all fifty states, an RPA licensed to practice in any state will be qualified to practice in all of them.

The licensing boards of each state will apply a uniform legislation, and most of the board members will be professionally designated RPAs, thereby assuring maximum requirements and efficiency of administration. There will, of course, be standard licensing examinations for all of the states. Other board members will be selected from university faculty members, who will teach the basic courses in the field.

Like the CPA firms today, the RPA field may develop chains with offices located in the major cities of the country. These offices will be linked electronically. A complete and open exchange in information among RPA offices will be facilitated by the computer. Most of the data collected, stored, analyzed, retrieved, and disseminated will be handled by electronic equipment even more sophisticated than the almost magical equipment now available.

The scope of service of the RPA’s office will be broader than that of the typical real estate appraiser today. In addition, the type of service will be different. No attempt will be made to operate a full-service office as many companies do today by combining sales, construction, development, appraising, financing, and so on. The services of the RPA’s office will be strictly professional and will include the real estate appraisal as well as research related to real property, probability theory, urban planning,

urban economics application, feasibility and marketability studies, counseling, and all other types of analyses to assist in the decision-making process related to real property.

The courts will take a new attitude toward this professionally qualified man. While the RPAs may continue to serve as expert witnesses, the judges will invite RPAs to serve as a "friend of the court" when real property matters are concerned. The judge will select the most qualified person to provide expert advice and counsel and by so doing render a more fair service. Unfortunately, too many judges today select for court-appointed appraisers those who are not qualified to render a professional opinion.

The Professional Organization

The professional group of which the RPA will be a member will be nationally recognized along with other professional organizations. The organization—there will be only one—will be staffed with highly qualified personnel who will direct its activities. These activities will be primarily educational in nature, although the organization will also be involved in public relations, enforcement of the code of professional and ethical conduct, and the certification of new RPAs.

The national organization of the mid-eighties will be less dictatorial than today's organization concerning materials to be taught and enforcement of the code of ethics and standard of professional conduct. For example, it is through our national organizations today that the three approaches to value (cost, market, and income) have been developed and required of all its members. Also, the national organizations have taken a firm stand on the minimum content of an appraisal report.

By the mid-eighties such requirements will no longer be necessary. Inasmuch as the codes will be established on performance, the scope of the educational activities of the national organization will also change. This group will

concentrate on the development of new techniques and methods, leaving the universities and colleges the obligation and opportunity to teach basic theory and principles.

The RPA will be considered by the public as a professional because of his conduct and broad acceptance. In order to be a professional, he will not only have acquired the educational attainments, but also have assumed greater social responsibilities. His acceptance by the public will be evidenced by the weight carried by his opinions, counsel, and advice. He will reach by the mid-eighties the lofty status that obviates him of the necessity of proving to the public the manner in which he reached his conclusions; the public will accept his opinions and recommendations on the basis of his reputation and reliability. Therefore, the actual enforcement of the code of ethics and professional conduct by the organization will be minimal, although, as in every pursuit, there will be those who deserve, because of their actions, reprimands and/or expulsion from the professional organization.

One of the major concerns of every professional or professional businessman is the matter of conflict of interest. Some designated appraisers and others in the real estate business today feel strongly that they should not be involved for profit in any type of personal enterprise that may in any way appear or develop as a conflict with their service to their clients or the public.

Others in the real estate industry feel just as strongly that they not only have the right but the obligation to participate in real estate activities for profit; by so doing, they are getting practical experience in the field in which they are best qualified. In addition, they are enhancing their own economic future. The RPA will be involved openly in property development, management, and ownership for his own personal profit, but in the event there is the slightest possibility of conflict in his rendering an objective opinion, he will openly and immediately declare himself not available

for the assignment. In addition, no other member of the firm will offer his service to the party.

Continuing educational programs will be an activity of the national professional organizations. It will not only be responsible for its members' continuing education, but also for that of the public and those who are in the real estate appraisal and allied fields. Many of these programs will be offered in cooperation with universities.

Due to higher admission standards, maximum effort will be directed to making the programs available to every interested and qualified person. As standards are raised, so must the opportunities to meet these standards be broadened. This will be the joint responsibility of the professional organization and the universities.

The RPA Report

One of the most interesting concepts associated with the emergence of the RPA of the mid-eighties is his report. No longer will the analyst make the type of narrative report now made by the real estate appraiser. No longer will he have the responsibility to prove his point by submitting a lengthy detailed explanation of how he reached his conclusion. The RPA's recommendations and opinions will be accepted on the same basis as those of a doctor who writes out a prescription and the lawyer who renders an opinion about a legal matter. Having been rigorously trained, he is not faced with the responsibility of explaining why or how he reached his decision.

He will render a brief report in which he will give his solutions to any problem, or give his recommendation of a value or his opinion regarding marketability or feasibility of the project. He will continue to go through much the same appraisal process that we now follow, broadened and improved in many respects. All the evidence of his full research and analysis of the subject will be contained in the real

An RPA Report of the Eighties

G. FREDERICK BLOSSUM
REAL PROPERTY ANALYST
521 E. 4th Street
Boontown, Indiana

February 26, 1986

John M. Able
Attorney at Law
101 E. Wildwood
Boontown, Indiana

Dear Mr. Able:

It is my opinion that the market value (as defined and explained in Addendum A) of real property #14743, commonly known as 313 North Paradise, Boontown, God's County, Indiana as of February 1, 1986, is TWO HUNDRED TWENTY FIVE THOUSAND DOLLARS (\$225,000.00).

Attached hereto and made a part of this report are the Addenda listed below. Additional supporting data will be maintained in the property docket in my permanent files.

If you have any questions, please do not hesitate to call me.

Professionally yours,

G. Frederick Blossum
G. Frederick Blossum, R.P.A.

Addendum A—Market Value
Definition and Explanation
Addendum B—Legal
Description and Survey
Addendum C—Rights
Being Valued
Addendum D—Pictures,
Maps, etc.



property docket file. There will be no illustrative description of the physical characteristics of the building or of the economic future of the community or of the market of which the real property is a part.

In all cases, however, he will have fully

considered the impact of the physical facilities, the economic base, and the market in his final opinion of value. The accompanying letter is an example of such a report. The term "It is my opinion that" has been used intentionally in order to emphasize that this truly is an opinion of the professional, contrasted with the present interpretation of an opinion. Lawyers render opinions, doctors give diagnoses, CPAs and architects make recommendations, and so I visualize that RPAs will render their opinions after thorough study of all data. Note also that the parcel of real property has been given a number. All real property records will be modernized by adoption of one standard coding process. In the illustrative letter, only four addenda are included; these would typically be the minimum. For those properties in which there is a major factor affecting value,

such as zoning or lack thereof, the RPA might need a short summary statement in the letter or in the addenda explaining it.

EVEN if this concept of a professional real property analyst materializes in the next decade, others who are not so designated will continue to make real estate appraisals or to render other real property services. Just as in accounting, there are the bookkeepers, the accountants, and the CPAs. The system will still accommodate the broker-appraiser, whom I compare more with the bookkeeper; the certified appraiser, more in the category of accountant; and the RPA at the same level as the CPA. However, more and more individuals, businesses, major industries, and governmental units will look to the RPA for advice and counsel in the real estate field.

The 1973 Tax Package: Effect on Real Estate and Real Estate Industry

DONALD W. KIEFER

Director, Commission on State Tax and Financing Policy

The 1973 tax package affects the real estate industry in Indiana in five important ways. The primary one, of course, is the reduction in property taxes beginning with the May 1974 installment. The reduction derives from three sources (detailed in previous articles in this series). The first is the 20 percent state property tax relief fund credit, financed by an increase in the sales tax and corporate adjusted gross income tax. The second source is the property tax replacement credit in counties which adopt the local option income tax, and the third is the new state control on the property tax levies of local governments and

schools. These three elements combine to provide a minimum property tax reduction of 20 percent (with certain allowable exceptions) in counties which have not adopted the local income tax and greater reductions (in many cases 30 percent or more) in adopting counties.

The second major effect of the tax package on the real estate industry is that, in many cases, mortgage lenders will be involved in the administration of the property tax credit. Financial institutions that pay property taxes on the property for which they hold mortgages and charge the mortgagor for the taxes in the monthly billing receive the property tax state-

ments for the mortgaged property directly from the county treasurer.

To receive the May 1974 property tax statement (and each one thereafter) the mortgage lender will have to sign a statement agreeing to forward the "notice of state property tax replacement credit" to the mortgagor within thirty days. The lender must also advise the mortgagor, in writing concurrently with mailing the notice, of one of the following: a reduction in monthly payments to reflect the lower property taxes; a refund of the property tax replacement credit; or the reason for not granting a reduced payment or refund.

The mortgage lender will be fined \$5.00 for each property tax statement signed for but not forwarded to the mortgagor with the accompanying statement. If the mortgage lender does not sign the agreement, the county treasurer will mail the property tax statement directly to the mortgagor. This procedure also applies to attorneys or other financial managers who pay property taxes for their clients.

The tax package's third effect on the real estate industry is in the administration of the property tax circuit-breaker for persons who are 65 or older, or disabled and have less than \$5,000 in household income. If persons qualified for the credit rented their homestead during all or part of the tax year, their landlord must fill out a short form (included in the individual income tax return packet) verifying the length of rental and total rent paid by the tenant. Landlords have the opportunity to perform a valuable service for their tenants who may qualify for this credit by notifying the tenants of this credit's existence. The credit is refundable and may be claimed regardless of whether the tenant files an Indiana income tax form. The claimant could receive up to \$375 in credit from the circuit-breaker, and the credit may be claimed as late as June 30 for the previous taxable year.

The fourth effect of the tax package on the real estate industry concerns the payment of accrued property taxes at the time of sale. In

many real estate sales, the seller agrees to pay the buyer the accrued property taxes to the date of sale. The usual interpretation is that accrued property taxes include a pro rata share of taxes due and payable during the period extending one year from the date of sale (due to the one year lag between assessment and payment of taxes based on that assessment). Under this interpretation, all real estate transactions occurring on or after January 1, 1973 should have taken account of the property tax reduction attributable to the tax package in computing accrued taxes payable.

The fifth effect of the tax package on the real estate industry is the upward influence on real estate prices that may be exerted by the reduction in property taxes. Perhaps the simplest way to explain this argument is to imagine two houses for sale which are identical in all respects except that one has lower annual maintenance costs. Most buyers would be willing to pay a somewhat higher price for the house with the lower maintenance cost. To property owners, property taxes are similar to annual maintenance costs, so a reduction in property taxes should increase the amount buyers are willing to pay for the property.

A second way of viewing this argument is to realize the value of property ownership is determined by the flow of services the property provides. For example, a home provides housing services and related benefits (recreation, safety, and status). Each prospective buyer will form an evaluation of the flow of services from a piece of property. This evaluation will determine the total amount he is willing to pay for the property, including capital costs, maintenance, and property taxes. If property taxes decrease and there is nothing that changes the potential buyer's evaluation of the property, he still will be willing to pay the same total amount to obtain the property, that is, he will be willing to pay a higher price (capital cost).

The most explicit example of this is an income property. Assume an apartment building will produce \$2,000 of income net of maintenance costs but before property taxes

each year. If property taxes are \$800, net income is \$1,200. Assuming an interest rate of 8 percent, the property is worth $\$15,000 \times .08 = \$12,000$.* If there is a 20 percent reduction in property taxes, after-tax income rises to \$1,340 and the value of the property increases to \$17,000 ($\$17,000 \times .08 = \$1,340$).

This theory is widely, but not universally, accepted by economists. The degree to which the property tax is "capitalized" depends upon

*To simplify the example, assume that the \$2,000 of net income before taxes will continue in perpetuity.

the ultimate incidence of the tax and the economic environment in which the tax change occurs. The capitalization of the property tax changes in the 1973 tax package may be difficult to identify because of the aberrations in the housing market occurring simultaneously with reactions to the package. However, the opportunity to study the issue should provide an interesting project for some enterprising economist.

EDITOR'S NOTE: This article is the fifth in a series summarizing various aspects of the tax package passed by the 1973 Indiana General Assembly.

The Tax Derby

MORTON J. MARCUS

Research Economist

Division of Research, School of Business, Indiana University

Central to any discussion of real estate is the question of taxes. How high are Indiana taxes compared to other states in the Union? In the January/February 1973 issue of the *IBR*, Donald W. Kiefer reported the ranking of Indiana's taxes relative to that of other states. Recently released data from the Bureau of the Census make it possible for us to update the record.

In the fiscal year 1971-72, New York State continued to have the highest per capita state and local tax burden, thereby retaining its number 1 rank (see the accompanying table). Indiana ranked 29th among the fifty states. Our levy of \$444.11 in state and local taxes for each person living in the state was nearly 11 percent higher than in the preceding year, and we moved up from 32nd to 29th in the tax derby. Nationally, the average state and local tax burden rose from \$460.47 in 1970-71 to \$522.49 in 1971-72.

Another aspect of taxation is the ability to

pay. Frequently, taxes as a percent of personal income can serve as a good indicator of the burden a community places on itself. When we look at state and local taxes as a percent of personal income, Indiana ranks 36th among the states. In fiscal 1972, our state and local taxes equaled 11.1 percent of our personal income. This figure compares with a national average of 12.7 percent. In the preceding fiscal year, state and local taxes equaled 10.8 percent of personal income.

Our rank as 36th in this measure of effort should be seen in the light of our ranking as the 19th state in terms of personal income per capita. New York State, which ranks 2nd in per capita personal income, ranks 1st in effort, while 14th ranked Ohio is next to last in effort. Given the resources we have available, we direct a smaller portion into the public sector than is the case in most other states. Whether this is wisdom or folly is subject to debate.

How about property taxes? Some Hoosiers

State-wide Tax Levels and Rankings (1971-72 Fiscal Year)

State and Local Taxes

<i>Per Capita</i>			<i>As Percent of Personal Income</i>		
	United States	\$522.49		United States	12.7%
1	New York	788.68	1	New York	15.8
9	Illinois	575.19	15	Michigan	13.0
11	Michigan	569.36	29	Illinois	12.1
29	Indiana	444.11	36	Indiana	11.1
36	Ohio	418.76	44	Kentucky	10.8
45	Kentucky	354.10	49	Ohio	10.1
50	Alabama	311.62	50	Alaska	9.8

State and Local Property Taxes

<i>Per Capita</i>			<i>As Percent of Personal Income</i>		
	United States	\$202.33		United States	4.9%
1	California	326.93	1	South Dakota	7.3
11	Illinois	236.63	17	Indiana	5.5
16	Michigan	222.82	21	Michigan	5.1
18	Indiana	219.89	23	Illinois	5.0
26	Ohio	180.26	28	Ohio	4.3
49	Kentucky	73.87	48	Kentucky	2.3
50	Alabama	42.54	50	Alabama	1.4

SOURCE: *U.S. Census of Government, Governmental Finances in 1971-72* (Washington: U.S. Government Printing Office, December 1973), pp. 45 and 50.

feel that this form of government support is oppressive. The statistics do indicate that in fiscal 1972, before the recent tax package went into effect, Indiana citizens paid \$219.89 per capita in state and local property taxes, a figure that was nearly 9 percent above the national average. In this measure, we ranked 18th in the nation. When property taxes are expressed as a percent of personal income, we rank still higher—17th among the states, with 5.5 percent of our personal income going to pay property taxes.

These figures can be misleading since they include all taxes paid by business firms as well as by individuals. To the extent that business taxes are passed forward to consumers (who may not reside in Indiana) or passed backwards to stockholders (some of whom reside in other

states), the full amount of these taxes is not a burden on Indiana residents. Of course, taxes in other states are included in the prices of goods we purchase, and the entire picture can become muddled if all possible circumstances are considered. But we can generally feel confident that such issues will not change dramatically the basic conclusions:

Indiana state and local taxes are below the national average whether measured in terms of people or their ability to pay

Indiana state and local property taxes, in 1972, were above the national average.

It remains to be seen what position we will occupy in the 1973 tax derby after the full results are in from all the states. This may be one race we will not choose to win.

Higher Energy Costs—Implications for Location Patterns and Land Use

R. L. PFISTER

BRUCE L. JAFFEE

*Director, Division of Research
School of Business, Indiana University*

*Assistant Professor of Business Economics and Public Policy
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A widely held view today is that energy costs, in both absolute and relative terms, will never again be as low as they were in recent years. A few dissenters argue that, given time for new supplies of energy to develop, the prices will fall from their present high levels and perhaps approach the levels of just a year or so ago. These dissenters are still a minority.

This article assumes that energy prices in the future will be substantially above their levels of the recent past and that they will also rise relative to all other prices. The authors do not attempt to resolve the question of whether energy prices will or will not decline. The objective is to speculate about the potential changes that higher relative energy costs might bring, particularly with respect to location patterns and land use within cities. Many commentators seem to overstate the expected effects of higher energy prices, in some cases ignoring factors that may mitigate these effects.

The discussion is speculative because the necessary data to develop an extensive evaluation of the effects of higher relative energy costs are not available. The ideas and views are speculations and hypotheses rather than forecasts or projections based on hard data.

EFFECTS OF HIGHER PRICES

Higher relative prices have two separate effects on the behavior of firms and consumers. The first, which economists call the substitution

effect of a price increase, refers to the fact that higher energy prices will induce users to economize on their use of energy and to switch to substitute products whenever possible. This switch occurs because substitute products are now cheaper in relative terms. When substitutes exist that come relatively close to satisfying the user's needs, we should expect, over time, large-scale product substitution. In some instances, reliability and waiting time may be as important as higher energy prices. The choice of alternative fuels will depend on relative prices, but it will also depend upon the probability of continuous service, shortages, and brownouts. Furthermore, waiting costs, as best illustrated by long lines of cars at gasoline stations, will increase economic costs even above posted prices.

The second effect of price increases on behavior is a reduction in the spending power (real income) of users. This impact, the so-called income effect, tends to reduce the amount of goods and services which both consumers and firms are able to purchase, thus lowering their standards of living.

The following discussion stresses the substitution effect rather than the income effect of higher energy costs. The latter has significantly affected consumers' real income because of the large price increases for energy which have occurred (and which many economists expect to continue) and because a relatively large portion (approximately 6 percent as of December 1972) of an average consumer's budget is

spent on fuel and utilities. But the effect of higher energy prices on real income is likely to be less than the recent and continuing increase in food prices. Food represents approximately 22 percent of the typical consumer's spending, and food prices rose 20 percent in the twelve-month period ending January 1974.

SUBSTITUTION EFFECTS

On Passenger Transportation—Higher fuel costs, especially for gasoline, clearly affect the costs of transporting people. For most, this increase means higher costs for commuting, making shopping trips, and taking vacations and other business and recreational trips. Any increase in the relative costs of transportation causes consumers to react by attempting to economize on transportation and change to a less fuel-intensive mode of travel. On one hand, households simply substitute other items, whose costs have not risen in relative terms, for some of their expenditures on transportation.

The amount of such substitution depends upon the elasticity of demand for transportation services and how much relative costs rise because of increases in gasoline or other fuel costs. It is widely held that the elasticity of demand for gasoline is low. Actually, little empirical information exists to assess the elasticity of demand over changes in price as wide as those in recent months. Demand might be relatively insensitive or inelastic to small price changes but be quite sensitive to large ones. The elasticity would also be expected to increase substantially as time passes, since certain energy-economizing measures may take a relatively long period of time to institute. Only time will enable us to assess this elasticity better than we are able to with currently available data.

Since higher transportation costs are likely to initiate changes in modes of transportation, we would expect, for example, some substitution away from automobiles toward mass transit, walking, and bicycles for intraurban trans-

portation, and toward trains, buses, and planes for intercity trips. Increased car pooling and a switch toward cars with above average mileage are other examples of this phenomenon.

Higher relative fuel costs probably will also cause the rates for public or mass transit to increase more than prices generally. Thus the traveling public would have some incentive to economize even on the use of these forms of transportation. Measurement of these effects is complicated by the fact that taste and other factors are also changing. It would be misleading, for example, to impute all of the recent increase in bicycle sales to the energy crisis.

On Location Patterns and Land Use—Let us assume that households will attempt to economize on transportation expenditures and will use fewer transportation services. What are the implications of this assumption for the locational patterns of residences and economic activity within cities? Obviously, it will increase the demand for locations that are close or easily accessible to employment centers, shopping centers, and so on. A relative increase in the cost of transportation within cities will be a reversal of a long-run trend towards decreased relative costs of transportation that has facilitated and stimulated the dispersion of people and activities within urban areas.

It is unlikely, however, that a rise in fuel prices and thus in transportation costs will offset other forces, such as income increases, preference for low-density residential areas, technological changes, crime, and racial considerations that continue to bring about further dispersal of people and activities. The increase in transportation costs could easily be overwhelmed by these other forces so that no discernible slowdown or reversal in dispersion would occur.

If fuel costs should continue to increase at their current rates, the effects on location decisions could be marked. Residential areas close to mass transit lines, employment centers, and shopping centers could be expected to increase in price relative to more distant areas. If this shift in choices is substantial, we may

expect more intensive land use, that is, denser settlements, more apartment buildings, and smaller lots for single-family houses in areas close to the major shopping and employment centers. Perhaps subregional shopping centers will become more popular. On the other hand, the relative rise in fuel costs seems unlikely to bring about a return to conditions favorable to the small mom-and-pop corner stores. In general, households will plan shopping trips more carefully and cut down on the trips to pick up just one or two items.

Commercial and industrial establishments can be expected to substitute other inputs for transportation, especially whenever transportation expenses are a large percentage of their total costs. Many firms in recent years have chosen locations in suburban areas. To the extent that higher fuel costs discourage commuting by automobile, these locations may become less desirable. They are somewhat isolated from public transportation and may not be near the homes of the persons who work there. This factor does not mean, however, that these commercial and industrial establishments will move back into the central city. Other adjustments are possible, such as development of either public or mass transportation, perhaps provided privately by large employers; more car pooling; or other means that will conserve on fuel and still permit the establishments to continue at their suburban locations. Nevertheless, business firms will give more weight to transportation costs in their location decisions both with respect to their labor forces, inputs, and outputs.

High transport costs have always served as barriers to trade and insulated local markets from competition. The number of smaller producers increases, therefore, as other inputs are substituted for transportation. Such tendencies would exist within cities as well as among regions.

Other Changes—Higher fuel costs could also have a differential impact upon the modes of transporting freight. The prevailing view (disputed by truckers) is that rail transport requires

less fuel per ton of freight than trucks. If so, higher fuel costs could shift freight from trucks to railroads and ships. With such a shift, commercial and industrial sites close to railroad sidings and docks would become desirable.

Certain industries or activities are likely to suffer as a result of higher energy prices. These would include ski and ocean resorts; trade and service activities oriented to traveling; producers of power boats, mobile homes, recreational vehicles; and generally the manufacturer of any item that uses large amounts of energy either in its construction or operation. Industries which should expect increased business include insulation manufacturers, local restaurants, and small car manufacturers. Once again it should be stressed that the effect of higher energy prices, whether positive or negative, may be swamped by other factors.

The public sector would also be affected by efforts to economize on transportation or change transportation modes. The substitution effect could change the way public agencies operate in carrying out their daily functions as well as decisions concerning the location of public facilities. School districts, for instance, might emphasize more but smaller schools to permit more students to walk rather than be transported by parents or by bus. Higher transportation costs might weaken support for busing of students to achieve racial balance.

If auto traffic declines, governments would spend relatively less on highways, roads, and streets in both construction and maintenance. State and local governments would collect less income from gasoline taxes, tolls, and automobile excise taxes. Cities might reduce street lighting that had been installed initially to reduce crime or improve visibility for motorists.

Higher fuel costs could significantly change life styles. We have already mentioned that households could choose residential locations that would reduce commuting. They might also choose to travel less for recreation and vacations. If so, recreational activities in the home or neighborhood and do-it-yourself projects might replace those that require traveling. With

thermostats set lower in the winter and higher in the summer, consumers will wear heavier clothes in the winter and lighter clothes in the summer. Water heaters may be reset to lower the temperature of hot water.

Households may choose smaller dwelling units. Since climate control is a major consumer of fuel, builders and architects may alter the design of houses to reflect substitutions for fuel expenditures. Houses will be better insulated. Automobiles and garages may become smaller; more homes may have one-car rather than two-car garages.

Some families may choose to live in regions with milder climates. This movement is already under way, but it has probably not been influenced by fuel costs. Milder climates might, however, require more fuel for air conditioning in the summer, which may offset the lower fuel requirements in the winter.

Consumer products (all products, for that matter) may be made of materials requiring less energy or fuel to produce. Natural fibers may replace synthetic ones; steel and glass may begin to replace aluminum and plastics.

THE potential changes that higher energy costs might bring about are endless. As the preceding speculations suggest, such higher costs might influence the form of cities, the use of different modes of transportation, the design of homes and other structures, the use of alternative materials, and life styles.

Whether such changes come about will depend upon how much these prices rise and the sensitivity of various decisions to such increases. Other forces and changes could easily swamp the effects of higher energy prices, and those prices might not rise much, relative to other prices.

The Sales Meeting—Two Views

The problem of sales is common to all businesses, large or small. Therefore, the performance of the sales function is a major concern in the real estate brokerage firm, which is primarily a small business. The editors of the Indiana Business Review asked two persons—one an academician and the other a practitioner in the real estate field—to set down their ideas concerning the sales meeting. Their views are comparable in key areas.

THE ACADEMICIAN

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One of the most effective and widely used tools of sales management is the organized sales meeting. Its importance is unique to the personal selling situation. The professional salesman's work is generally "outside" and unsupervised; thus, the sales meeting becomes a vital link representing management's most accessible means of communication with its sales force.

This is especially true in the real estate profession.

The basic purpose of any sales meeting is to enhance performance. For example, one important purpose is to motivate; meetings are designed to produce the level of enthusiasm necessary to sustain hard work. The sales meeting is also often used to directly impart

information. Frequently, the objective is to provide product knowledge. Other common subjects are changes in company policy, information on new marketing strategies, and information on changes in market conditions.

The sales meeting can also be effectively used for sales training, usually continuous training for the entire force. An effective sales force is maintained by a constant nurturing of their professional skills.

The sales meeting is indeed a basic sales management tool. There are basically three ways to think about its importance. First, the possibilities for actually increasing sales effectiveness are substantial. Second, it is not cheap. Sales is the one situation where the phrase "Time is money" is most apt. One expert's rule of thumb for determining the hourly cost of a sales meeting is to double the value of the pay per hour of each person attending and add any direct costs of the meeting. For example, a meeting that included ten people whose average income was \$10,000 would cost \$96 per hour plus direct costs for visual aids, facilities, preparation, and outside speakers.*

Third, opportunities are missed if sales meetings are not held or are generally unproductive. If meetings are an effective tool for maintaining and increasing performance, then the cost of not doing so must be high.

Given the above, the objective should be to make sales meetings as productive as possible. The discussion that follows outlines the major factors that must be considered in the design and conduct of effective meetings.

ADVANCE PREPARATION

Ask a dozen knowledgeable people what makes a good sales meeting, and they will answer in a dozen different ways. However, one common thread will weave through all the answers—

*J. C. Aspley and Ovid Riso, *Sales Manager's Handbook* (11th ed.; Chicago: The Dartnell Corporation, 1968), pp. 632-33.

preparation. To have any probability of success, the meeting must be planned and organized in detail; consistent physical arrangements must be made; and the meeting leaders must be well prepared.

Developing Objectives—The starting point for preparing a sales meeting is to establish the objectives to be accomplished. As in virtually all management processes, planning and execution falter because of the failure to determine and articulate feasible objectives. Clear cut objectives can be established by answering the following questions:

What should the sales staff *know* that they would not know without attending the meeting?

What should the sales staff *believe* that they might not believe without attending the meeting?

How should the sales personnel *behave* as a result of the meeting? How should their behavior after the meeting differ from their previous behavior?

What *skill* does the sales staff need to master?

How should the sales staff *feel* about their jobs as a result of the meeting? What attitude change or motivational impact is desired?

The established objectives determine everything else: the timing and the length of the meeting, identification of sales force members who should be involved, the necessary facilities and aids, the program content, and the method of conducting the meeting. Precise statement of the objectives facilitates proper decision making about all other aspects of the meeting. The extra time taken to prepare for a sales meeting by establishing precise objectives can prevent the waste of valuable time and money, and ensure the accomplishment of the objectives. The following list demonstrates how objectives which are too general can be given precise meanings in order to be managerially useful.

General Objective: "I want my sales personnel to be familiar with all new listings."

Specific Objectives: "I want my sales personnel to view and tour all new listings, be

given written information that describes all important physical aspects of the property, be aware of all of the property's benefits which can be used in an effective sales presentation, be aware of all problems that prospective buyers might raise as objections, be aware of the seller's needs which could affect any offer made on the property, and be aware of any special problems associated with financing the sale of the property."

General Objective: "I want to indoctrinate my new sales people."

Specific Objectives: "In this meeting I want my new sales people to meet and get to know all existing sales personnel. I want a setting where all sales people can stand up and be introduced by me with comments covering their background and important characteristics. I also want time for an informal meeting which would provide a more social one-to-one atmosphere."

"I want my new sales people to know and understand all company policies regarding commissions, profit sharing, insurance programs, and commission payment schedules."

"I want my new people to understand the firm's marketing strategy with respect to development, residential housing, commercial property, property management services, listings, and institutional advertising."

General Objective: "I want my salesperson to learn how to understand his customer's needs."

Specific Objectives: "I want my salesperson to learn to ask the proper questions that will enable him to gain accurate information regarding the customer's physical housing needs, location needs, preferences, occupancy timing needs, and realistic financial requirements for purposes of finding property that will fulfill those needs."

General Objective: "I want to motivate my sales people."

Specific Objectives: "I want to significantly entertain my people (at company expense) for a job well done and expose them to an outstanding, inspirational, sales-oriented speaker."

"I want my sales people to feel they are definitely a part of this firm by making sure they understand the magnitude of support effort the firm provides to enable them to earn commissions."

One could list many more, and perhaps better, sample objectives. The few given above, however, should be sufficient to demonstrate how stating precise objectives specifies what actually needs to be done. The broad objective does not state what the specific needs are, and the person trying to reach a broad objective is likely to try to do too much or miss critical issues.

When establishing sales meeting objectives, the following suggestions may be useful.

The sales meeting objectives should be put in writing.

The sales meeting objectives should be reviewed in order to determine if the meeting is worth the time, money, and effort or if a sales meeting is the proper means of accomplishing the stated objectives. Perhaps a memo or individual conferences with sales people will suffice.

The sales meeting coordinators should not attempt to accomplish too many objectives in one meeting.

Again, meeting objectives should be as specific and as detailed as possible.

Meeting Plan Development—Good preplanning for a sales meeting is a must. Preplanning is made simpler if the objectives of the meeting are carefully established, but the following questions are important and should be considered at this stage.

First, who should attend the meeting? Should the meeting include all of the selling staff or only a segment, for example, relatively new people? Who from management or other nonselling staff areas should attend?

Second, what specific topics should be covered during the meeting? Obviously, the topics should be a direct outgrowth of the objectives to be accomplished.

Third, what teaching and presentation methods are necessary to get the subject matter across as well as possible? This subject will be discussed in greater detail later in this article. At this point, it is sufficient to note that there are important correlations between specific material and methods of presentation.

Fourth, is any additional input needed? It is frequently desirable to have one or more sales people make a formal presentation as well as have other members of management and selected outsiders contribute to the meeting. When this is the case, the participants should be given clear instructions and details about their functions as early as possible.

A good job of preparing meeting leaders is particularly important when a sales person is to make a presentation. He is being asked to perform before his peers. He may be an outstanding salesman, but he may have little experience in speaking before groups. His task will be made easier and his success more likely if he is given early and explicit instructions.

Fifth, what physical props and visual aids are necessary? Should any materials be prepared and distributed in advance? Generally, learning and understanding can be significantly enhanced by good visual aids. Also, specific material that participants need to remember should be printed for distribution.

Sixth, what kind of physical facilities does the meeting require? There are a number of arguments regarding the best physical settings for sales meetings. Obviously, the selection of the location and facilities depends on many things. Regular and frequent meetings are generally held in company offices due to cost and convenience factors. For meetings which last more than one day, it is often desirable to convene away from the office and the interruptions of daily business.

The facilities should not detract from efficient conduct of and participation in the meeting. Most important, the facilities should be consistent with the needs dictated by the methods used to conduct the meeting. For example, if the sales force will be divided into small discussion groups, several small rooms would be more appropriate than one large room.

Seventh, when should meetings be held, and how long should they last? Clearly, the timing

of sales meeting depends largely on the needs of the company and the participants. As for their length, the basic question which must be answered is how much time is needed to accomplish the objectives of the meeting.

Regular and frequent meetings should be smooth and relatively short (one and one-half to two hours). Any meeting should have a definite time to end. Sales people, especially, must know when they will be free to schedule appointments with clients. Meetings that have training objectives usually require more time.

CONDUCTING THE SALES MEETING

The methods of organizing and conducting a sales meeting must be matched to the objectives of the meeting and its content. One must also consider the particular abilities of the people who will be involved in leading the session.

This notion of attempting to match the way a sales meeting is run to the objectives is important because different techniques are best suited for particular objectives. The accompanying table provides a fairly comprehensive list of possible sales meeting objectives and shows the type of meeting best suited to the objective and the benefits and features of each type.

GETTING PEOPLE INVOLVED

The quality of a meeting is usually enhanced when sales people themselves participate actively. If the sales staff plays a passive part, they are likely to hear and learn less and be generally unreceptive to the topics presented. Leading a meeting in a way that encourages good participation is an art that takes practice and is something that the sales manager should consciously attempt to develop. However, a number of ideas and techniques are available to help generate meaningful participation from the sales people.

The following list of suggestions is not

all-inclusive, but should provide a basic idea of how a sales meeting should be conducted.

Frequently ask one or more persons to play a specific role in a sales meeting (such as giving a demonstration). This technique allows them to become directly involved in the meeting and

should make other audience members more open.

Begin by asking for participation early in the meeting and continue to do so until the audience responds. Surprisingly, even salesmen are often reluctant to talk. Participation, how-

Suitable Program Techniques for Various Sales Meeting Objectives

<i>Objective of the Sales Meeting</i>	<i>Most Suitable Meeting Format</i>	<i>Features and Benefits</i>
To train salesmen to gain new knowledge, skills, or insights into problems	Workshop	General sessions and face-to-face groups. Participants also serve as trainers.
To share experience among experts	Seminar	Usually a single face-to-face group. Discussion leaders control participants. Provides compact exchange of ideas.
To train in one particular subject	Clinic	Usually face-to-face grouping but may have general sessions
To train in several subjects	Institute	General sessions and face-to-face groups
To apply new skills or information to real-life situations	Application groups	Mixed composition from total group by interests. Many use trainer to suggest methods. Usually no more than ten.
To help salesmen get acquainted	Orientation groups	A mixed membership from total group. Member of staff of each group to introduce participants and answer questions. Used only for brief period at start of meeting.
To give participants opportunity to react and make suggestions	Off-the-record sessions	Mixed membership from total group. Officially scheduled "bull session."
To present information and provide inspiration	Speech or film	Can convey large quantity of factual information. Residual value must be augmented by takeaway material—lecture outlines, workbooks, and booklets.
To present complex information such as new product or service, or details of new sales and advertising campaign	Speakers with visuals	More thorough and certain communication with great residual value. Takes more time and money than speaker only.
To present information from many points of view, sometimes controversial	Panel	Each member of the panel states his views and discusses with other members. Moderator guides discussion and keeps peace among panelists. Panel members usually hold brief rehearsal. Audience can question and comment.
To help salesmen analyze individual or group action in natural setting	Situation presentation	Salesmen play roles or present case history. Commentator may call attention to specific points as "play" progresses.
To demonstrate skills or techniques and show relative effectiveness	Skill presentation	Salesmen, supervisors, or trainers demonstrate different ways to handle a selling problem. Salesmen in audience to observe and discuss.

SOURCE: J. C. Aspley and Ovid Riso, *Sales Manager's Handbook* (11th ed.; Chicago: The Dartnell Corporation, 1968), pp. 653-55.

sidered. Some will be turned down, but group rejection is less discouraging than leadership rejection, and participants will still feel that their ideas are welcome. The sales manager should never attempt to "railroad" his own proposals through; instead, the group should be encouraged to work out their own. Such participation is more likely to motivate them toward finding the ultimate solution. If some individuals tend to withdraw from the discussion, the manager should fire questions directly at them.

The leader of a sales meeting should never permit meetings to be turned into "gripe" sessions. When the need arises for such a meeting, one should be called for the purpose of airing complaints. Such a meeting will act as a safety valve and improve morale. Problems have a way of diminishing in importance when they are brought into the open. If the manager finds that all of the sales associates seem to share a common problem, corrective action should be taken at once.

The top sales manager knows the weaknesses, ambitions, worries, and personal problems of the individuals in his sales team. This knowledge will help him handle the problem personalities. There is, for instance, the quiet type. He may be resentful; that is why he is so quiet. Or he may be timid. In this case, he should be called on by name for his opinion and should be complimented when he does talk.

Then there is the heckler, ready to argue about any point. He is usually the good-natured member of the group, but he does not speed the progress of the meeting. His witticisms should be dealt with by the group rather than by the sales manager, and if this fails to check his style, a private session may be required to get his cooperation.

The talkative type likes the sound of his own voice. He may well be informed and anxious to tell what he knows. He should not be embarrassed because his knowledge may be valuable later. The sales manager can slow him down by saying, "Just a minute. Let's see what

the rest of the group thinks," or he can be asked a tough question and the group can deal with his reply.

The conversationalists will usually join forces and sit beside each other. The manager can try to break them up by discussing the problem with them in a private session, or he can call on them individually and ask a direct question. If the person does not hear the question, it should be restated rather than embarrass the person; after all, participation is needed.

The apple polisher in every group must be identified. His constant agreement may lead the manager to believe that everything is perfect, and if the manager succumbs to this notion, he has lost the rest of the group. The sales manager must also be aware of the satisfied salesman. He is probably relaxed because he lacks a goal and is not extending himself.

Sometimes the leader may find it difficult to keep the discussion on the main subject, especially when associates are engaged in a heated debate. The most tactful method of getting back to the original subject is to ask a "follow-up" question that calls for an answer relating to the topic. If this approach fails, the only alternative is to announce, "Let's see if we can get an answer to the original question."

A sales manager who calls a meeting is acting as a salesman; he may want to sell his associates on the idea of making more calls; thinking up a new way to combat competition; making better use of sales aids; or improving morale. Whatever he is selling, his colleagues are not buying if they are not listening. If the meeting cannot be made interesting, perhaps one should not be called. Sometimes a guest speaker from a related field is a welcome change.

Whether the sales manager schedules meetings on a daily, weekly, or monthly basis, he will do well to heed this comment: "The mind can absorb only as much as the bottom can endure." His reward for good sales meetings will be that his sales associates just may let him keep his job for another year.

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Highlights of the Outlook—A Message from the Dean	1
The Outlook: A Reevaluation of the Forecast for 1974	3
Government Purchases of Goods and Services	4
Business Fixed Investment	6
Residential Structures	7
Automobiles	8
Inventories	9
Net Exports	9
Other Personal Consumption Expenditures	11
Prices and Money	12
The Indiana Economy	13
Terre Haute	14
Fort Wayne	15
Muncie	16
Indianapolis	17
Evansville	18
Gary-Hammond-East Chicago	20
Southeastern Area	21
South Bend-Elkhart	23

There is no evidence of a general consumer strike against rising prices, but consumer expenditures are neither providing a stimulus to recovery nor compounding the depressing economic effects of the declines in the automobile and housing markets.

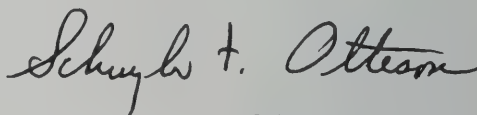
Business firms are following conservative inventory policies, and it is expected that the inventory/sales ratios will rise moderately in the remainder of the year.

A deficit in the balance of trade is a likely result of sharp increases in foreign oil prices. In addition, net exports will decline as long as the U.S. inflation rate outpaces inflation in most of our major trading-partner countries.

The peak in interest rates is expected by early summer, but there will be no steady decline in these rates without strong indications of an easing in inflationary pressures. A stringent monetary policy is necessary to bring the U.S. rate of inflation down significantly by the fourth quarter of 1974.

The Indiana economy has remained strong during the recent months. Particular strength is noted in the steel industry, and farm income is expected to remain high. Individual areas within the state are expected to have stable economic conditions with local non-residential construction activities contributing to selective new employment opportunities.

Many diverse views are synthesized in this outlook. We trust that the composite picture that emerges from these pages will provide a significant background for public and private decisions during the remainder of this year.



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The Outlook:

A Reevaluation of the Forecast for 1974

Over the past couple of decades, the record of the forecasting fraternity has been, on the whole, rather good. In the past nine months, however, forecasters have had to cope with greater uncertainty. The world-wide crop failures of 1973 were hardly predictable. The Arab embargo was not predictable, at least by economists as economists. The change in psychological attitudes caused by the Watergate affair and succeeding events could hardly be forecasted. Nevertheless, after allowing for these situations, some of which were past history at the time the forecasts were made, the recent track record of forecasters has not been as precise as it has been in the past.

Our forecast of last November predicted a 1973 fourth quarter GNP, in dollars, of \$1,332 billion (seasonally adjusted annual rate) and \$1,359 billion for the first quarter. Both forecasts were almost on the button, but they

benefited from an assist by the patron saint of all forecasters—the principle of compensating errors. We underestimated inflation and overestimated real output. We predicted a decline in residential construction and automobile buying, but the actual decline was even more severe. We underestimated inventory accumulation in the fourth quarter of 1973 and overestimated it in the first quarter of 1974. And our forecast of new exports was on the low side.

To a great extent, our miscalculations can be attributed to our assumption that the oil embargo would end “within a few weeks.” It did not, and the consequences on both inflation and real output compounded during the ensuing months.

By now, it is obvious that the combined effects of the embargo, the continuance of tight money from 1973 to 1974 (after a brief respite early this year), and other depressing events are yielding a significant decline in real output. This decline will persist for a few more months, which is long enough to be classified as a recession by the standard definition—a decline in real output for two consecutive quarters. Furthermore, we foresee little real recovery until late in the year. For the year as a whole,

This issue of the “Outlook” was prepared by Ross M. Robertson, Eugene Brady, Howard G. Schaller, and Robert C. Turner of the Department of Business Economics and Public Policy, and Joseph C. Miller of the Department of Marketing.

This forecast is consistent with the views expressed by the Economic Outlook Panel of the School of Business in statewide discussions presented in May 1974.

this will mean a drop in real output of close to 1 percent below the 1973 level, in contrast to a normal growth rate of over 4 percent.

However, we do foresee some easing of inflationary pressures in the second half of the year. This estimate may be far from the mark; price increases posted after the termination of price controls coupled with labor union pressure for wage increases (to match and exceed present and anticipated increases in the cost of living) will continue to push the price indexes upward. But recently, there have been declines in prices of major agricultural products, and the oil embargo has probably had its major price impact. A number of internationally traded commodities show signs of price softening. And the low level of business activity envisioned in our forecast will have a repressing effect on some consumer prices. (A good harvest this summer and fall would help by keeping food prices down.) Therefore, although inflation will continue to be a serious problem, some relief may be in sight. However, a decline to the inflation rate of only two years ago is hardly in the cards. For the year, we see an average inflation rate of 8.5 percent with a higher inflation rate in the first half of the year than in the second half.

Our forecast also implies an increase in the unemployment rate. In the past, the unemployment rate has pretty well conformed to "Okun's Law," which says that the unemployment rate at any given time will be 4 percent plus one-third of the gap between actual and potential GNP expressed as a percentage of potential. So far this year, however, the unemployment rate has risen less than Okun's Law suggests. In part, this may be a statistical fluke: the labor force, as estimated from respondents included in the sample survey, has grown less than normally. Marginal participants have withdrawn from the labor force rather than continue to job hunt and be classified as unemployed. But the modest growth in the unemployment rate also suggests that many

employers have looked upon the current downturn as a temporary event, and therefore have hesitated to lay off employees in whom they have a substantial training investment. This tendency may persist, but it is more likely that, as the expected recovery continues its evasive course, people will be laid off and Okun's Law will reassert itself. We therefore anticipate an unemployment rate significantly above 6 percent by late summer or early fall, if not sooner.

Whether or not the Federal Reserve will continue its attempts to contain inflation, in the face of rising unemployment, is an open question. As suggested in the closing paragraphs of this forecast, it is our guess that the Fed will persist in its policy of monetary stringency, at least for several more months. And this is one important reason for our conclusion that recovery will in fact be delayed until late in the year, but that even though small, some relief from inflationary pressures is in sight.

GOVERNMENT PURCHASES OF GOODS & SERVICES



Last November, we forecasted (on the basis of an actual figure for the third quarter of 1973) that total federal government purchases of foods and services for the 1974 fiscal year would be \$111.2 billion.* This forecast was made before the President's fiscal 1974 budget was available. When the budget was announced

*The November-December 1973 *IBR* table showing the GNP forecast contained a typographical error for the fourth quarter of 1973. The total federal government purchases of goods and services should have been given as \$109.0 billion instead of \$109.9 billion. However, the components of the total, Defense (\$75.0 billion) and Other (\$34.0 billion), were correct, and the total for all levels of government (federal plus state and local) was also correct. The accompanying table forecasting GNP for the fiscal year uses the correct figure for 1973.

Forecasted Gross National Product by Sector*

	Year 1973	Q1 † 1974	Q2 1974	Q3 1974	Q4 1974	Year 1974	% Change 1973-74
Government purchases of goods and services	277.1	297.8	302.9	311.1	320.5	307.6	11.0
Federal	106.6	112.1	113.9	116.0	119.0	115.1	7.9
Defense	73.9	76.3	77.8	79.0	81.0	78.5	6.2
Other	32.7	35.8	36.1	37.0	38.0	36.6	11.8
State and local	170.5	185.7	189.0	195.0	201.5	192.5	12.9
Gross private domestic investment	202.2	198.9	209.0	213.0	217.0	210.2	4.0
Business fixed investment	136.2	144.1	147.4	149.6	152.0	148.4	9.0
Residential construction	58.0	49.3	52.1	52.4	53.0	51.8	-10.7
Inventory accumulation	8.0	5.5	9.5	11.0	12.0	10.1	2.6
Net exports	5.8	10.9	-2.6	-3.8	-2.9	.1	-98.3
Personal consumption expenditures	804.1	844.6	858.7	876.5	898.7	869.6	8.2
Automobiles	57.8	48.3	48.5	50.5	53.0	50.1	-13.2
Other consumption expenditures	746.3	796.3	810.2	826.0	845.7	819.6	9.8
Gross national product	1,289.1	1,352.2	1,368.0	1,396.8	1,433.3	1,387.5	7.6
GNP deflator (1958 = 100)	153.9	162.7	165.7	168.7	171.2	167.0	8.5
GNP in 1958 dollars	837.4	831.0	825.6	828.0	837.2	830.8	-.8

*Figures in billions of dollars, seasonally adjusted annual rates. Figures may not balance due to rounding.

†Preliminary estimate of actual expenditures as of May 26, 1974.

in January, the translation of the budget into national income accounting terms, given in the *Special Analyses of the Budget*, seemed to confirm our projection. The estimate of federal government purchases of goods and services for the 1974 fiscal year was \$111.7 billion. However, since the budget was announced, actual nondefense expenditures for the fourth quarter of calendar 1973 and the first quarter of 1974 have run significantly below the budget figures and even below our lower estimate, and the total for the fiscal year will be below the budget unless a major jump in spending occurs in the last quarter of the fiscal year (the second quarter of the 1974 calendar year).

Comments from people who are knowledgeable on budget matters suggest that such a jump

is improbable. The explanation of the shortfall of government spending below budget estimates seem to be that, due perhaps to the current malaise in Washington, federal agencies are simply not pressing forward on their programs as fast as originally planned. Most of the funds appropriated by the Congress for these programs (except for those appropriations which expire at the end of the fiscal year) will no doubt eventually be spent, but the lag in spending may persist for many months. We are therefore lowering our forecast for federal government purchases of goods and services.

State and local government purchases of goods and services, on the other hand, are running above our November estimate. In the past, simple trend extrapolation has been the

most reliable method of forecasting state and local government spending, but it is apparent that inflation is forcing local governments to increase their spending at an even faster pace than past trends would suggest. How long this increase will continue is difficult to predict; many local governments are cutting back on programs, especially public schools, in an effort to bring their expenditures within their revenues, which, due to the sluggish performance of the economy this year, have not risen proportionately. But such cutbacks do take time, partly because contractual relationships are involved and partly because the cutbacks are resisted by employees and by the public served by the programs. It is our guess that such economizing efforts will be only partially successful and that state and local expenditures will continue to rise at an abnormal rate. We are therefore revising upward our prior estimate for state and local government purchases of goods and services.

Because state and local purchases far outweigh federal purchases, the net effect of these two revisions is a significant increase over our November forecast for purchases of goods and services by all levels of government. This increase should be seen especially in the last quarter of 1974.

BUSINESS FIXED INVESTMENT



When the *Indiana Business Review* forecast was prepared last fall, the annual fall surveys (Commerce and McGraw-Hill) of business' intentions to purchase plant and equipment had not appeared, but the forecast indicated that the expansion of such outlays, which began in early 1971, would continue throughout 1974. The subsequent appearance of the surveys in the fall, and again this spring, substantiated the

prediction. Our current forecast is that business fixed investment will continue its expansion throughout 1974 but at a slightly lower rate than anticipated last fall. For the year we are now anticipating expenditures of \$148.4 billion, a 9 percent increase over 1973.

Last November's forecast called for business fixed investment expenditures of \$144.0 billion (seasonally adjusted annual rate) during the first quarter of 1974. The preliminary figure for the quarter is \$141.8 billion. While the forecast is close when reviewed in absolute terms, it is nonetheless interesting that the advance was only 7 percent on an annual rate basis which is considerably less than what our forecast and other observers had anticipated. The quarterly advance compared with 11 percent for the previous quarter. When one remembers that inflation probably accounts for much of the rise, the performance during the first quarter has to be considered as disappointing.

The rather slower rate of capital spending during the first quarter probably was caused, at least in part, by the interruptions in production and the inability to get deliveries as a result of the energy crisis and shortages of materials. Apprehension over the business outlook may have been a contributing factor.

While the first quarter expenditures may have been lower than anticipated, the optimism displayed by the surveys seems justified. Many industries continue to run at capacity and new orders remain high. Corporate profits also remain high, and the capital markets indicate continued ability to supply external financing. The agricultural outlook remains good although a slump in net farm income may dampen farm investment outlays.

The basic factor underlying this continued expansion is, of course, the desire to expand capacity in the energy-supplying industries and industries producing materials which are in short supply. Also, the demand for pollution controls continues to add strength to capital spending. These factors will undoubtedly con-

tinue throughout 1974 and into 1975. However, some of the extreme optimism is perhaps unwarranted since the capital-goods industries may not be able to produce all of the plant and equipment that is wanted. While 1975 is beyond the scope of our present report, we do feel the need to caution against premature acceptance of the hypothesis of a two- or three-year capital boom. Continued high interest rates, the dimming corporate profits picture, and rising costs in the energy-using industries may eventually take a toll.

RESIDENTIAL STRUCTURES



The level of residential housing construction, which peaked in February of 1972 and has declined steadily since that date, is currently continuing its slump. Housing starts in March had fallen to 1.46 million units (stated at a seasonally adjusted annual rate), representing a drop of about 40 percent from the previous peak level. Recent record levels of inflation have led monetary authorities to curb the rate of growth of the money supply in the face of strong business demand, and interest rates have moved upward sharply. Mortgage rates have risen to unprecedented levels, and the recent drop in housing starts has been by far its largest absolute decline, and one of the greatest relative declines on record.

Late last year, most housing forecasters felt that the housing cycle would bottom out in the second or early third quarter of 1974 and continue to move upward through the later months of the year. However, the recent sharp surge in long-term interest rates which has caused serious disruptions in the bond markets has led economists to maintain their previously pessimistic expectations with regard to residential housing. Mortgage rates have recently

jumped from around 8½ percent to 9 percent in some areas, and the specter of disintermediation is again haunting the thrift institutions. Mutual savings banks are already experiencing savings deposit withdrawals that exceed those of the credit crunch that took place last summer, and the Federal Home Loan Bank Board has increased the allowable limits on its advance rate to member savings and loan associations.

All of these signs point toward further deterioration of housing markets. There is a strong relationship between the rate of inflation and the level of long-term interest rates, including mortgage rates. The money rate of interest rises when the rate of inflation increases because lenders must receive a higher money return on their funds to offset the decreased real value of these returns caused by inflation. Inflation has caused mortgage rates to rise to unprecedented levels, and consumers are less willing to finance purchases of new housing with the higher rates. Continuing high interest rates pose a severe danger in that savings flows will be diverted from thrift institutions to higher yielding short-term money market assets and in that the housing market will suffer.

The level of housing starts will not turn significantly upward until at least the fourth quarter of this year, if then. The Administration has recently announced several ways in which the housing industry can be cushioned from the impact of high nominal interest rates. Further, as is discussed later in this forecast, there is some prospect that interest rates may begin to ease somewhat this summer. But the inevitable lags are such that it is unlikely that either of these events will cause housing to turn the corner before the end of the year.

On the bright side of the picture is the fact that housing slumps have never lasted for a considerable period of time. The housing market has always rebounded fairly sharply from periods of trough, and there is reason to believe that housing should turn around in early 1975, if not in late 1974.

The long-term picture is much more optimistic. Any possible overbuilding as a result of the 1971-1972-1973 period of housing boom will be dissipated by the 1974 slump, and replacement demand will be strong in coming years. Demographic patterns for the rest of the decade indicate strong housing demand. The number of households that will reach the house-building stage in their life cycles during the remainder of this decade will be double the number that reached this stage in the 1950s and early 1960s. If housing can weather the financial climate of 1974, strong underlying demand factors should insure bright prospects for future growth in residential housing.

Unfortunately, this is not the case for 1974. Total investment in residential structures is expected to rise slightly in nominal values through the fourth quarter of 1974, reflecting the combination of rising residential construction costs and flat or slightly declining numbers of starts.

AUTOMOBILES



Even before the oil embargo and the public awareness of the energy crisis, some analysts were seeing a slow year in 1974 for the automobile industry. Automobile sales had been running high for three years, and they had been financed by a substantial increase in consumer installment credit. Moreover, there was some question as to consumer acceptability of new anti-pollution and safety devices.

As the fourth quarter began, the embargo was announced, and the energy crisis became a matter of public concern. By the time the *Indiana Business Review* forecast was being prepared last fall, it was apparent that automobile sales were turning down. The slide was hastened as publicity surrounding the crisis was

intensified and as fuel costs mounted. Late in 1973 it was evident that the decline would be greater than anticipated. Personal consumption expenditures on automobiles and parts fell from \$59.2 billion (seasonally adjusted annual rate) in the third quarter of 1973 to \$51.8 billion in the fourth quarter and to \$48.1 billion in the first quarter of 1974.

As the demand for automobiles fell, there was a change in the composition of demand as consumer preferences shifted toward small cars. This caused the accumulation on dealer lots of rather large inventories of standard-sized automobiles. Not all of the demand for smaller cars could be met since it takes time for manufacturers to retool. The change in the product mix also served to lower total dollar expenditures since the average price of the units sold decreased.

In addition to the decline in automobile sales, this sector has also been affected by the decline in sales of recreational vehicles and a slackening in mobile home sales. The former was directly related to the energy crisis while the latter was more directly related to the factors affecting residential construction.

The signals in the automobile market for the remainder of the year are clouded. The lifting of the embargo and the more generous availability of fuel supplies were expected to spur sales. Sales did appear to rise in early April, but by late in the month there was some concern as to whether recovery was really on its way. Factors tending to increase the dollar expenditures are higher prices of automobiles and the tendency to increase the accessories on small units. But higher prices may freeze out some buyers, and consumer wariness of increased fuel costs probably continues to dampen sales. However, as the worst of the energy crisis recedes, we expect the consumer to return gradually to the market.

It is our forecast that personal consumption expenditures on automobiles and parts will be relatively unchanged during the second

quarter of this year and then will rise gradually during the second half. By the end of the year, the expenditure rate will be running slightly below that of the fourth quarter of 1973 and the total for the year 1974 will have declined about 13 percent from 1973.



Inventory change is probably the most difficult component of GNP to forecast. Even the preliminary reports by the Department of Commerce on actual inventory change in the most recent quarter are sometimes revised by 25-50 percent or more a month or two later. This forecasting task is rendered especially difficult at this time because of the size of the "inventory valuation adjustment" (IVA). The IVA is the correction, negative when prices are rising, that Commerce adds (algebraically) to actual inventory change to remove the profit on inventory turnover attributable solely to inflation. The corporate inventory change as preliminarily estimated for the first quarter of 1974 was a whopping \$17.3 billion (seasonally adjusted annual rate). The actual inventory change for all nonfarm business, after the IVA corrections, was only \$6.8 billion. Nevertheless, an estimate of inventory change plus IVA must be made.

It is significant that, although total manufacturing and trade inventory/sales ratios have risen slightly in the early months of 1974, they are still very low by historical standards. It is apparent that, despite the prospective profits to be made from price inflation of items held in inventory, business firms are following conservative inventory policies. To some extent, these low inventory/sales ratios reflect long-term improvement in inventory control

methods, and in part they may be due to inability to get deliveries of scarce items. Also, the high cost of borrowed money to carry inventories has no doubt dampened enthusiasm for inventory buying. But after giving full allowance for these factors, it is still evident that business firms are not eager to go out on a limb in their inventory policy.

In our judgment, inventories/sales ratios will rise moderately in the remainder of the year. The resolution of various bottlenecks in production of scarce materials, and the beneficial effects on production planning of the removal of price controls on April 30, will make it easier to accumulate inventories. And consistent with the modest recovery in the second half of the year that our forecast foresees, an equally modest buildup in inventories seems to be indicated.



Net exports (exports minus imports of goods and services) in 1974 once held the promise of repeating or even exceeding the surplus performance of 1973, but sharp increases in oil import prices now make a deficit trade balance likely. Oil imports make up only one component of total U.S. trade, but their impact on the overall balance is expected to become greater with the lifting of the export embargo by the Mideast countries.

The other major determinants of net exports will provide some stimulus for continued growth in exports, thereby partially offsetting the effects of rising oil prices, but the overall direction will be toward a trade deficit. As discussed in previous forecasts, the three major categories of determinants of future changes in net exports are international exchange rates,

U.S. production relative to output levels in foreign countries that trade with the United States, and the relative price changes (or rates of inflation) in this country and abroad.

Each of the three groups of determinants of the trade balance contains stable, long-lasting influences. For example, growth rates of national product usually change slowly over several months, and foreign exchange rates are altered infrequently. However, there are unexpected changes that can significantly affect the level of net exports. The increases in oil prices were not entirely unanticipated, but the timing and steepness of the price rises were difficult to predict. The exporting strength of American agriculture will continue throughout the next decade and probably beyond, but the difficulty lies in trying to foresee the short-term changes such as U.S. shipments of wheat to the Soviet Union in 1973.

Exchange rates. The U.S. dollar devaluations of December 1971 and February 1973 resulted in delayed but beneficial effects regarding export stimulation. After two years of deficit trade balances, U.S. net exports in 1973 returned to a surplus level. Net exports grew throughout 1973, reaching a peak in December. To a large extent the growth in net exports came as a result of the devaluations.

The immediate effect of the currency devaluations, in early 1972 and in February 1973, produced little change in net exports. Once foreign demand had time to adjust to the new lower prices of exports and domestic U.S. demand recognized the higher prices of imports, however, the second-round effect of increases in net exports occurred.

Analysis of currency realignments in other countries has shown that a rather different, third-round effect is likely to result. With the growth in net exports, domestic real incomes rise and thus contribute to the demand pressures that worsen inflation. Increases in inflation can at least partially cancel the benefits of income growth resulting from the second-round

rise in net exports. Although it is still too early to analyze the situation fully, it seems quite possible that the United States has entered into the third-round effect of the devaluations and that the current high rate of inflation may be partially due to this influence.

Growth in output. While the growth of foreign demand for U.S. goods and services exceeds the rate of increase in domestic demand, the demand for American exports will be stronger than the U.S. demand for imports. Growth in U.S. output began to level off in the fourth quarter of 1973 and declined by almost 6 percent in the first quarter of 1974. Indicators point to a continued low rate of decline in the second quarter with some recovery likely in the second half of 1974. In Western Europe, Canada, and Japan, the major export markets of the United States, output growth has decreased from 1973 rates, but unlike the United States, no country has yet shown a decline in demand for U.S. goods. The reduction in foreign growth rates will dampen the demand for U.S. exports, and thus contribute to the decrease in net exports.

Relative prices. Reversing the pattern of recent years, U.S. inflation in 1974 has outpaced inflationary rates in most of the major trading-partner countries of the United States. The implications of this trend are that the prices of American exports are rising faster than the prices of foreign goods, and thus demand for U.S. exports will grow more slowly than the demand for competing foreign goods and imports. The result is another influence contributing to the decline in net exports.

Data published by the International Monetary Fund show that for the twelve months between March 1973 and March 1974, the U.S. rate of inflation was 9.4 percent, ahead of most Western European countries. Only Great Britain, Italy, and Switzerland had higher rates, and the rates of Belgium, France, and West Germany were significantly lower. In all of the countries, including the United States, the rates

of inflation have accelerated. If the foreign rates begin to exceed the U.S. rate in the second half of 1974 and if the Japanese and British rates continue to be above America's inflation rate, the present tendency toward a deficit balance may be reversed.

As mentioned earlier, the steep increases in the prices of imported oil are expected to contribute very significantly to a deficit trade balance. Imports exceeded exports by \$171.3 million in March according to U.S. Department of Commerce reports, making it the first deficit month in almost a year and well below the \$213.1 million surplus of February 1974. U.S. exports rose by less than 1 percent in March, while imports increased by 6.9 percent. More than half (52.2 percent) of the increase in imports represented increases in the costs of imported petroleum and related products, despite a small decline (2 percent) in the quantity of these products imported. Compared to March 1973 prices, the value of petroleum products has more than tripled.

Because March is probably the low point in volume in oil imports, as a result of the earlier embargo, the trade balance is almost certain to become worse in the next several months. Even though petroleum import prices are not expected to rise much in the second or third quarters, the growth in volume of imports will more than offset any gains in exports.

OTHER PERSONAL CONSUMPTION EXPENDITURES



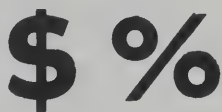
Recent press coverage indicates that various consumer sentiment surveys, especially one conducted by the University of Michigan Survey Research Center, show consumers to be more pessimistic about the economic outlook

than they have been for years (at least, in case of the Michigan survey, since the survey was launched in 1962). However, except for purchases of automobiles and related items, consumers have behaved in a quite normal manner. In fact, according to the Commerce Department's preliminary figures (and in spite of the drop in automobile purchases), consumers spent a larger proportion of their incomes in the first quarter of 1974 than in the fourth quarter of 1973, that is, the saving rate declined from 7.3 percent to 6.5 percent over that interval.

Measured in dollars of constant purchasing power, total consumer expenditures have declined slightly. The decline is more than explained, however, by the drop in automobile buying. There is no evidence of excessive pessimism or of a general consumer strike against rising prices. Rather, consumers have simply been forced to absorb the higher prices to maintain, or try to maintain, their standards of living. Indeed, after adjustments for normal seasonal variations, consumers have continued to take on new consumer debt faster than they have paid off old debt.

We see no reason to expect a significant change in this behavior. In past periods, when incomes have risen less than prices—when real incomes have declined—consumers have stubbornly continued to spend at or near their former rates, dipping into savings or taking on new debt as necessary. In a sharp, severe decline, of course, such behavior could not be continued indefinitely. But our forecast does not indicate such a decline.

We are therefore forecasting an 8.2 percent increase in consumer spending from 1972 to 1973, only slightly less than the 8.5 percent increase in the GNP deflator. This means that, although consumers are hardly providing a stimulus to recovery, neither are they compounding the depressing economic effects of the declines in the automobile and housing industries. In other words, they are responding in their customary way.



Perhaps the most perplexing economic phenomenon of the past few months has been the rapid and persistent increase in interest rates that followed the December-February decline in both short- and long-term rates. What most observers considered a natural and temporary reaction to the mid-winter improvement in the market for debt instruments had by May threatened to become a financial panic as serious as the one in 1970. With the treasury bill rate, commercial paper rate, and prime interest rate at or near historic highs, some investment advisors were warning clients of the possible inability of some large corporations to roll over their paper. Some apprehension was even expressed about the difficulties large banks might encounter in meeting maturities on large certificates of deposit, a concern largely relieved by Federal Reserve assurances that the discount window would be open to member banks to enable them to meet these obligations when they become due.

A first look at both the demand and the supply sides of the money market does not yield a satisfactory explanation for such extreme stringency. To be sure, business borrowing has been very strong indeed, approaching in the first quarter of 1974 levels reached in the booming first quarter of 1973. But the monetary aggregates were apparently increasing at a rate which was more than sufficient to accommodate such a demand; the non-borrowed monetary base had risen by 7 percent, and the narrowly defined monetary stock, M_1 , by 12 percent on an annual rate basis in February and March. Yet closer examination suggests unusual pressures, and, hopefully, the increase is transitory. Business borrowing to finance new plant and equipment rose much faster than aggregate

first-quarter income figures would have indicated, and borrowing to finance first-quarter increases in inventory accounts, in large part, for the demand for funds. Adding to these requirements were stepped-up purchases by many corporate buyers in an effort to beat the anticipated higher prices associated with the end of price controls. Moreover, corporate borrowing to meet the April 15 tax date was much larger than expected because of the rise in corporate profits in the latter half of 1973.

On the money supply side, the figures for the monetary base and the money stock, M_1 , appear more expansive than they turned out to be. A record rise in currency outside banks during the first quarter more than absorbed the rise in the monetary base, and although M_1 grew by more than \$7.6 billion between January 30 and April 10, private and U.S. government demand deposits actually fell by \$2.1 billion, or 5 percent, in the same period.

After all such considerations are taken into account, there remains the strong possibility that the present peak of interest rates will be reached by early summer. No one, however, expects a steady decline in rates until there are strong indications that inflationary pressures are easing. In the very short term, Federal Reserve policy actions can bring temporary ease to the money markets simply by creating more money, but short-term relief is illusory if it stimulates business and household borrowing and causes the Fed to resort to another monetary injection to keep rates from returning to their old levels. The best course may be to continue with monetary stringency—to tough it out—and confront another monetary crisis like those of 1966 and 1970. At present, the Federal Reserve resolve to bring about such stringency is well publicized, and there is some likelihood that the monetary authority will stick to its guns. If it does, one more reason can be added to those discussed in the foregoing sections of this forecast for thinking that the U.S. rate of inflation can be brought down significantly by the fourth quarter of 1974.



The Indiana Economy

Introduction by Richard L. Pfister and Morton J. Marcus

EDITOR'S NOTE: This edition of the *IBR* combines the Outlook with what was formerly the Metropolitan Area Roundup. This combination should provide a more detailed description of current and expected business conditions in the various parts of the state.

In the November-December issue of the *IBR*, we noted the dependence of Indiana's economic activity upon national trends. We also noted that the state's economy was highly sensitive to changes in levels of national business activity because of the high concentration in durable goods production. All national cyclical changes seem to have their unique features, and the current one is no exception.

Given the national decline in real output, we might have expected an even sharper decline in economic activity in Indiana. Surprisingly, the unemployment rate (seasonally adjusted) for Indiana remained below that for the United States from October 1973 through January 1974. The Indiana rate did exceed the national figure in February and March of this year, but the Indiana Employment Security Division changed its method of reporting in February. It adjusted its procedures and figures to be in accord with the Census Population Survey upon which the national figures are based. This change added 20,000 persons to the unemployment estimates for January and February. Therefore, a comparison of unemployment rates before and after this change is not valid. Despite the difficulty in interpreting the unemployment rates because of the reporting method, the Indiana economy apparently has not shown the expected sensitivity to the national decline in real output.

Employment declines have been quite modest and have resulted primarily from the energy shortage and the cutback in production of full-sized autos. Manufacturing employment in March 1974 was only about 2 percent below that of a year ago. And part of this decline resulted from strikes. Employment in the steel industry has actually increased over the past year. Nonmanufacturing employment has shown a substantial increase.

The state's employment outlook for the remainder of the year is reasonably bright. If the expected turnaround in auto sales occurs in the latter part of 1974, employment in transportation equipment industry will increase and should be close to the 1973 level. Some workers who were laid off earlier have already been recalled by the automotive parts and recreational vehicle industries.

The steel industry is expected to continue operating at a high level with employment remaining strong. If consumer spending on durables continues to be sluggish in real terms, employment in the state's other durable goods production may not improve in the second half of the year. Although farm prices have fallen somewhat from their high levels of 1973 and will probably fall more, farm income is expected to maintain a high level. The expanded acreage in grain crops could result in sufficiently greater output to raise aggregate net farm income even though profit per unit of output will decline.

the different opportunities ahead for each region are well exemplified by the following

pages which report on individual metropolitan areas. Major energy producing facilities are scheduled for construction in several regions with expansion of production facilities expected in the steel producing area of Northwestern Indiana. Each area continues to be concerned with its public school financing and the effects of the 1973 tax package. Each area shares in the uncertain outlook for automobiles and parts, but because of their different types of manufacturing activity the concerns are not uniform. The diversity of opportunity is one of the state's economic strengths.

TERRE HAUTE

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Newspapers in the Wabash Valley have carried the following headlines during the past several weeks: Thursday, April 11, 1974, "\$800 MILLION AREA BOOST"; Wednesday, April 17, 1974, "\$45 MILLION PLAN for LILLY." An article in a later paper began as follows: "Permanent employment in the four-county Wabash Valley area as a result of an estimated \$1 billion industrial growth was . . . discussed . . . Thursday evening."

These major developments will shape the Terre Haute area's future. Vigo, Clay, Sullivan, and Vermillion Counties are each anticipating increased construction and tax-base expansion. As expansions and new industries enter the area, the construction industry in particular should enjoy tremendous growth over the next several years.

The largest planned expansion is that of the Indiana-Michigan Electric Company Breed Plant

in Sullivan County. An \$800 million program is planned over the next ten years. The plant will be the largest and most modern generating plant in the world, and its assessed valuation is currently higher than that of all Vigo County. Up to 4,000 construction workers will be employed at the height of the plant's construction. This plant will not only expand business opportunities within the area, but will also attract outside industries which depend on an assured source of electric power.

Another major expansion in progress is that of Eli Lilly and Company's Clinton Laboratories—a \$45 million program will double the productive capacity of this laboratory. It will include structures for chemical manufacturing, fermentation, and product recovery, and laboratories to provide technical support for production operations, along with waste treatment and environmental control facilities. This expansion should be completed in 1976.

Also planned is a new plant for Inland Container in Cayuga in Vermillion County. This plant for recycling paper into containerboard should be completed in 1975. A second paper industry addition will be the Ivy Hills Packaging Company plant in Vigo County, which will produce phonograph record jackets and phonograph and tape shipping containers. Brazil, in Clay County, will be the location for a Great Dane Plant, which will employ 300 people and produce over-the-road and piggyback trailers as well as other industrial trailers.

The Terre Haute area unemployment figure for March was 3.8 percent; the Indiana average was 6.1 percent. The expansion of Indiana-Michigan Electric Company coupled with Lilly's expansion, the Great Dane Project, and construction of the Inland Container and Ivy Hall plants should provide an excellent employment picture in this area for several years. While the overall employment figure is not expected to change in the immediate future, as construction employment soars, related and service areas should also expand.

FORT WAYNE

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During the current economic slowdown, which soon should be confirmed as a recession, aggregate economic activity in the Fort Wayne SMSA has suffered relatively little. Again, some elements of the diversified local economy have provided countervailing forces.

Area employment in March 1974 was 164,800, an increase of 3,600 over the previous March. (Previously reported employment figures have been in the 140,000 range; figures reported here are for the recently redefined SMSA, which includes Adams, DeKalb, and Wells Counties in addition to Allen County.) Seasonally adjusted unemployment is 3.4 percent, still enviable when compared with the government's 4 percent maximum goal (which some economists contend should be raised to at least 5 percent). Unemployment one year ago was only 2.7 percent of the labor force.

The general slowdown in economic activity nationally has resulted from decreased consumer purchases and an increase in the number of unemployed. It is the latter that the Fort Wayne area has generally avoided. Therefore, the area consumer's primary problem has been one of reallocating his income in response to the inflation-induced decrease in real purchasing power and the severe increases in prices of petroleum and petroleum-based products and services. The net depressant effect of these factors on the service and wholesale and retail trade segments of the local economy will probably continue; relief does not appear to be possible before the third quarter of 1974.

With respect to local residential construc-

tion, it appears that consumers are anxious to buy and contractors are equally anxious to build. Data indicate a sustainable single-dwelling building rate in Allen County of 85 units per month (deseasonalized). Single-dwelling units went from the doldrums of 48 units in March (the fifth smallest number of monthly starts since 1967) to 112 units in April (the fifth largest). This recovery is likely to be stymied, however; just as consumers resigned themselves to higher long-term interest rates, the rates surged even higher in April.

Offsetting this stalled segment of the local economy will be an increase in the number of tax-supported construction projects. Fort Wayne revenue-sharing monies have been held until project priorities could be established. Now that this has been accomplished, \$3-4 million should soon begin to diffuse through the local economy.

Recent announcements have been made concerning other multimillion dollar construction projects. These projects will probably have little impact economically in 1974, but should provide a strong base for 1975. Indiana & Michigan Electric Company and Peoples Trust Bank have announced joint plans for a \$30 million hotel, office, and bank complex to be started in the spring of 1975. A proposed \$22.6 million sports-convention center with a Hilton franchise is scheduled to start in July 1974 in northwest Fort Wayne. The Fort Wayne-Allen County Convention Tourism Authority is proposing a \$6 to \$7 million downtown civic convention center; the final decision will be made this May.

A relative increase in defense spending is probable in 1975; therefore, local government contract-related employment should be strong the next six months. Already, Magnavox has received \$14.3 million of a potential \$50 million multiyear contract from the USAF, and ITT's local Aerospace Optical Division has received a significant contract.

The manufacturing sector of the local economy can only be logically analyzed on a

disaggregated basis. The severe weakness in new car sales is a matter of record. This has depressed significantly the sales of manufacturers in the area who support the Detroit industry. Analysis of motor home factory shipments data indicates that sales are off in excess of 50 percent, and, contrary to some reports, have not rebounded to any extent. Sales of light trucks (14,000 lbs. or less) are off approximately 20 percent from first quarter of 1973, and dealer inventories are at record levels. Any resurgence of these two transportation segments does not seem probable until interest rates drop and the rate of inflation subsides.

The anomaly in this sector is the sale of heavy-duty trucks, which continues to take its cue from the surge in capital spending to overcome lack of capacity. Sales in 1974 have exceeded the record rate for the similar period by only a small percentage but would undoubtedly have been greater, given capacity. Locally, international Harvester continues to report record levels of unfilled orders. The company will not have its customary plant-wide July vacation, and plans have been announced for an 8 percent increase in production from 168 to 180 units per day, beginning in late August. Thus, the favorable impact of heavy truck and related manufacturing appears assured in the short run.

Primary metal and machinery manufacturing should remain stable, with declines in consumer-related demand being partially offset by capital spending.

To summarize, inflation hedge buying and capital purchases should provide a stable base of employment in the Fort Wayne area, at least temporarily, until inventories become relatively large and the inflationary surge is halted. At that time, the consumer should be psychologically ready to increase purchases, which will reverse local dynamics. The timing of the increase is, of course, difficult to judge, but it appears unlikely to occur before the end of the third quarter of 1974.

MUNCIE

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GNP took its steepest drop in sixteen years during the first quarter of 1974, and it seems plausible to expect local economic indicators to concurrently evidence weaknesses. A parallel decline in Muncie's economic activity is probable because the state's economy tends to fluctuate more than that of the nation, and, especially, because Muncie's manufacturing employment depends heavily upon the depressed transportation equipment sector. Paradoxically, however, the weaknesses are difficult to discern—indeed, the transportation equipment sector accounts for almost 90 percent of Muncie's yearly increase in employment over March of 1973.

These rather perverse consequences are, of course, tied to the energy squeeze and are readily explained by the fact that Warner Gear and Muncie Chevrolet produce manual transmissions. Muncie Chevrolet produces parts for the subcompacts as well as manual transmissions for the Vega. Warner Gear, Muncie's largest employer, produces manual transmissions for Ford compacts, among others, and is planning to bring on line a five-speed manual transmission with overdrive for compacts in 1975. On the debit side, the energy squeeze has prompted General Motors to postpone breaking ground for the Delco Battery Plant in Muncie's Industrial Centre.

Merchants generally report that retail sales were relatively good for the first quarter of 1974, but express uncertainty as to whether the increase in dollar returns masks a decrease in the physical volume of goods sold. According

to R. L. Polk and Co., unit auto sales for the first two months of 1974 were roughly 20 percent lower than the comparable 1973 months. Certainly, the large auto dealers find themselves in a new ball game—one that straps them financially as they attempt to weather the big car “blahs.”

Unit residential construction in the Muncie SMSA during the twelve months ending March 1974 was 30 percent lower than the comparable time period ending March 1973. While inclement weather may account for some of the sharp decline during the first quarter of 1974, increased downpayment requirements and rising mortgage rates were major factors. Should sizable disintermediation manifest itself in May or June, residential construction would be seriously impaired.

The many small machine tool shops on Muncie's industrial landscape continue to be besieged by a frantic backlog of orders while still being confronted with increasing delivery delays from their suppliers.

In general, Muncie's economic pulse remains steady. Seasonally adjusted unemployment is 4.9 percent; bank debits and electrical output show increases. The revitalization of the downtown area, under the aegis of Muncie Foresight, progresses, albeit at a snail's pace, but \$21 million invested through private construction and remodeling projects since 1968 have significantly improved the downtown silhouette.

INDIANAPOLIS

NANCY RUFF

*President, Indianapolis
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The Index of Indianapolis Business Activity, unlike most national economic indicators, continued to reflect increases through the first

quarter of 1974, albeit at a slower rate. As reflected by the business activity series, the Indianapolis economy during the past year experienced its greatest growth during the third quarter of 1973, measuring nearly a 5½ percent increase from the second quarter. The fourth quarter increase dropped to slightly less than 4 percent, and the first quarter 1974 preliminary data indicate an increase of less than 3½ percent from the previous quarter.

Examination of the components of the business activity index, however, reveals that—with the exception of nonmanufacturing employment—only those components measured in terms of dollars (bank debits, department store sales, and value of building permits issued) have reflected increases since the third quarter of 1973. Since these are the components that mirror most directly the recent record-high rates of inflation, gains in the index in the last two quarters may have been due more to inflation than to any “real” growth.

Effects of the recession (that most economists and business analysts agree began in the fourth quarter of 1973) are most apparent in the data of manufacturers in the Indianapolis area. The Index of Indianapolis Industrial Activity has dropped each month since its record high in November 1973, with the March index nearly 9 percent less than the November figure. (This index is based upon power consumed by plant operations.)

Transportation equipment production is the most important single industry in the Indianapolis area. Reflecting the performance of auto sales nationwide in the last year, activity has decreased in this industry some 20 percent since the November high. The second hardest hit industry in the Indianapolis economy appears to be electrical machinery, with activity in this area reflecting an 18 percent decrease since October. Among the major industries that make up the Indianapolis manufacturing community, that of food processing is the only one not reflecting some recent decline. During the first quarter, activity in this industry actually

increased nearly 2 percent from the fourth quarter.

Employment, another indicator not measured in terms of dollars in the Indianapolis economy, has shown a mixed pattern but some strength in recent months. Although unemployment, calculated on the new basis the Employment Security Division has been instructed to follow, was at a 5.4 percent rate in March, the local labor force and employment numbers (seasonally adjusted) continued to reflect increases during the first quarter. Nonmanufacturing employment was the primary source of gains in the employment numbers, but the decline in manufacturing employment from the fourth quarter to the first was only about 1 percent. Evidently, operations by Indianapolis manufacturers are being cut by reducing overtime, rather than by any large reduction in the number of workers. Average hours worked per week in manufacturing, seasonally adjusted, were cut from the fourth quarter December high of 42.6 hours to 41.5 hours in February.

Throughout 1973, while national data indicated fairly steady month-to-month decreases in housing construction, construction activity in Indianapolis remained high. Last year was a record year for construction in the city as measured by the inflation-influenced value of building permits issued; it was a near-record year, as measured by the 9,168 housing units authorized by those permits. Only in 1969 were more housing units authorized.

First quarter data for 1974 indicate continued strength in the construction area of Indianapolis economy, although not at the 1973 rate. Total value of all permits issued during the first quarter amounted to \$75.7 million, surpassed only by the \$86.6 million of the first quarter of 1973. The residential portion of this amount was \$22.3 million, down from the comparable 1973 figure of \$27.8 million and the 1972 figure of \$23.3 million. The 1,400 units authorized by this value compared to 2,083 units in 1973 and

1,793 units in 1972, but was still sizable compared to other years during the last decade.

Certain Indianapolis economic indicators are reflecting the effects of the flowing tendencies characteristic of the national economy. However, the greater-than-average growth and the diversification of the Indianapolis economy, which have occurred in recent years, give promise that this adjustment will not cause reductions in activity as great as those experienced by the city in past recessions.

EVANSVILLE

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In 1973, the Evansville region registered one of its most prosperous years in terms of economic performance. All sectors of the regional economy showed improvements of varying degrees. Measured by the Evansville Area Business Index, the 1973 performance was 6.91 percent above the level achieved in 1972.

Industrial production surged by 7.70 percent while the trade and service sectors improved by 2.48 percent. Construction activities registered the largest growth of all—22.81 percent. Transportation activities showed an increase of 3.84 percent. Financial activities expanded by 15.71 percent—partly due to inflation—thereby completing the third year of continuous growth. The most impressive growth occurred in employment; after three years of almost zero movement, regional employment rose by 3.16 percent. The regional rate of unemployment remained below the national rate throughout the year.

Toward the end of 1973, some softening became apparent in the Evansville economy as

Evansville Area Business Index, 1973 and 1974

Month	Industrial Production	Trade and Services	Construc- tion	Trans- portation	Finance	Employ- ment	Composite Index
1973							
January	131.03	119.03	110.82	110.08	157.32	101.12	122.02
August	133.83	115.35	128.37	113.87	162.89	104.10	124.35
September	125.87	115.35	141.69	105.47	149.95	104.82	121.04
October	135.85	114.20	144.76	110.20	164.40	105.86	125.94
November	125.69	113.00	146.63	103.86	167.94	105.86	121.55
December	117.21	111.48	137.29	102.59	163.70	105.86	116.71
1974							
January	135.63	115.04	127.39	111.83	184.09	105.36	125.66
February	138.25	119.04	127.96	107.25	184.03	105.47	127.70
March	121.49	111.49	129.45	102.91	202.62	097.81	118.42

in other parts of the nation. The oil embargo by the Arab nations and the shortage of strategic industrial raw materials began to have some effect in November and, especially, in December. Basically, this area has not been plagued severely in terms of energy supply. Being a coal-producing and oil-producing area, Evansville has a relatively abundant supply of these fossil fuels. Only the plastic firms in this region have had difficulty in getting necessary raw materials.

The year 1974 opened with active economic activities in January and February (see table above). In these two months, all sectors performed above the 1973 averages except for the transportation sector. Matching the national downturn in housing activities, the Evansville residential construction index also showed a downward movement; on the other hand, commercial and industrial construction increased to offset the decline.

The most damaging factor in the Evansville economy now is the strike by 7,200 workers of the Whirlpool Evansville plant, the largest employer in this region. The strike began on February 17 and remains unsettled. About 600 workers in the related firms were laid off as a

result. The adverse effects of this strike on the regional economy will be felt in the short run as well as in the long run. Loss of production, employment, income, and buying activities may multiply and accelerate as the strike drags on. However, a possible permanent reduction in the magnitudes of production and employment may undermine the local economic strength for many years to come.

The short-run ill effects of the strike are already reflected in the March index of the Evansville Area Business Index. The composite index fell from 127.70 to 118.42—a 7.27 percent loss. The industrial production index was down by 12.12 percent, the employment index was down by 7.26 percent, the trade and services index was down by 6.34 percent, and the transportation index also was down by 4.05 percent. Only construction and financial activities escaped.

The 1974 performance of the Evansville economy, therefore, will most likely fall short of its 1973 performance. The economic decline and inflation in the national economy, and the local strike have halted the momentum of economic growth that has been in effect for the last two years.

GARY-HAMMOND-EAST CHICAGO (Calumet Area)

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The index of local business activity has registered an annual average rate of growth of 3.59 percent during the 1947-73 period. The entire period from June 1972 to May 1974 has registered a growth rate in excess of the average. Our view for the next six months, however, indicates a slowing down of the high rates realized during the last six months of 1972 and the last five months of 1973, each period succeeding a mid-year decline or readjustment. Thus our forecast is a reversal of the cyclical pattern for this area, which tended to show periodic recoveries from minor mid-year relapses toward each year's end.

Federal reserve policy is, of course, a major unknown. Local demand for producers' capital is high. The Fed may continue to apply the brakes in order to slow down inflation. On the other hand, if the Fed succeeds in permanently reducing capital expansion—instead of simply delaying present plans until inflation becomes more manageable—shortages will emerge, putting more pressure on prices and, consequently, on wages. This might lead to a new round of local wage-price escalations.

IMPACT OF STEEL MILLS

A central consideration, of course, is the possible economic impact of the northern Indiana steel mills. Some of the findings of a ten-year study of their local impact, completed by the Workshop in Applied Economics under the direction of the author, are applicable.

The period from 1969 to 1974 was one of rapid growth in steel capacity in the area. It was a period of momentous technological progress, culminating in the completion of continuous slab casting plants at both Inland and U.S. Steel. New work also began on a smokeless coke plant. Employment in steel dramatically increased from an average of 59,000 in 1964 to a predicted average of about 67,000 in 1974.

Our study indicates that over a ten-year period about 36,000 persons (some on a more or less temporary basis) joined the labor force in the local steel mills. About 15,000 more entered the so-called new mills of Bethlehem and Midwest Steel, which are located in the Porter County area.

The new steel plants caused considerable change in both residential and employment patterns. We find that about 8,000 persons moved from jobs in the so-called old mills of U.S. Steel, Inland Steel, and Youngstown to the new steel facilities in Porter County. Of these 8,000 who changed employers, the majority has spent less than four years as employees of the old mills.

We note that of the 15,000 who entered the new mills, either as entrants into the labor force or as transfers from the old mills, almost 13,000 have moved into homes closer to the new mills, the majority moving from Lake into Porter County. Of those who moved into the new mills, less than 14 percent were members of minority groups. A little over 3 percent of the steel labor force also moved from the new mills to the old. Over 90 percent of the movers were white, and over 80 percent indicated that they had made the move because they were offered promotions and higher pay.

We expect that the steel employment pattern described will continue and will have a significant impact on the residential composition of this region of northern Indiana. We expect that as a result of stabilization of steel capacity in the old mills (and because of a slight decline in productivity in some of their departments) employment opportunities for minor-

ities will not increase as rapidly as the minority labor force will expand, thus causing a noticeable increase in local minority unemployment.

By applying a variety of statistical techniques, we note that minority members and the foreign-born are less likely to move from the old mills to the new than are native-born Caucasians; that older steelworkers with longer employment records—particularly Caucasians—are more likely to move from one mill to another than their younger counterparts; that transfers are more likely to get promotions and pay raises than those who stay; that promotion is a greater inducement to mobility than higher pay; and that technically trained personnel are more likely to move than unskilled persons. A projection based on these findings indicates that Porter County populations will tend to gain in income and “quality” (in terms of education, technical skills, and so on) while Lake County populations are likely to lose.

Finally, there is the question of how much new capacity will be added to the old mills, which will have to absorb most of the regional growth in the labor force. U.S. Steel has announced impressive capital expansion plans; however, these tend to be concentrated in smaller and specialized mills (possibly of optimal economic size). Moreover, local expansion plans are contingent on future levels of profits, interest rates, prices, and wages.

BUSINESS EXPANSION

Southlake Mall, heralded as the largest shopping complex in Indiana, is planning over 1 million square feet of selling space: 280,000 for Sears, 157,000 for Penneys, 140,000 for Carsons, and about 400,000 for a variety of specialty shops. Progress has been slower than was anticipated, but 1974-75 will see the Mall development slowly gathering momentum. There will also be further declines in the Hammond-Gary shopping complexes as shopping patterns in the southern fringes are gradually diverted toward

the south and east. The Jewel-Osco complex of general merchandise, drug, ladies' and men's apparel, and furniture stores will add about 800,000 to 900,000 square feet of new retail capacity by 1974 and early 1975. An expected loss—through bankruptcies and withdrawals—of about 500,000 square feet of selling space will leave the region with a net increase of about 400,000 square feet (not including Southlake Mall). If all retail plans materialize, the region will experience some overexpansion, which may reduce average per square foot sales by as much as 15 percent in real dollars.

Small manufacturing and metalworking plants (Keencast, Owens-Corning, and so on) will continue to expand in the remainder of 1974. Several specialized firms will continue to grow at rates in excess of 10 percent as several local counter subcycles continue to mitigate the expected leveling off in local business activity. Public nonresidential construction will also grow, primarily in nonmetropolitan areas.

SOUTHEASTERN AREA

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The Louisville metropolitan area economy, which had expanded so vigorously during 1972, grew much more slowly in 1973, and showed signs of a general decline during the first quarter of 1974. The indexes of local business activity given in the accompanying table outline the pattern of growth, slowdown, and decline.

Industrial production, measured in terms of electric power consumption and freight shipments out of the area, fluctuated around the January level throughout 1973, reaching a peak of 135.0 in August. The index recorded a steady decline during the first quarter of 1974.

Index of Louisville Area Business Activity
(1967 = 100, Seasonally Adjusted)

<i>Index</i>	<i>Jan. 1972</i>	<i>Jan. 1973</i>	<i>Oct. 1973</i>	<i>Jan. 1974</i>	<i>Mar. 1974</i>
Industrial production	121.7	133.0	133.1	129.5	125.6
Transportation	134.7	151.3	152.4	152.5	150.9
Trade and services	113.2	129.5	128.7	124.5	120.3
Construction	126.0	170.9	136.0	150.6	137.1
Financial	149.6	188.7	208.3	229.2	223.0
Employment	111.3	116.1	121.7	122.1	121.5
Composite Index	122.3	138.9	139.9	140.5	136.5

SOURCE: Research Department, Louisville Area Chamber of Commerce.

The transportation index, based on freight movement into and out of Louisville, also fluctuated around its January 1973 level during the past year. However, its peak was not reached until January 1974, and its first quarter decline was slight.

The trade and service index, based on department store sales, automobile sales, and trade and services employment, remained near its January level throughout 1973. The high point, 131.8, was reached in December, after which the index declined sharply, reflecting the slump in automobile sales and weak growth in retail sales.

Construction was the weakest sector of the local economy during 1973. After several years of extensive apartment construction, a saturation level has apparently been reached, and this type of construction has declined precipitately. In Jefferson County, Kentucky, which includes Louisville, only 1,870 building permits were issued for new multifamily units in 1973; permits for more than 7,300 such units were issued in 1972. In fact, the 1973 figure was less than one-half the number of multifamily units authorized each year from 1968 to 1972. Construction of single family dwellings remained much more stable in 1973, declining by only 1.5 percent, while nonresidential building permits increased in number but declined in value by 23 percent. Although the construction

index (see table) shows a decline for the first quarter of 1974, this index was actually stronger during the first quarter than during the two preceding quarters; furthermore, the total value of building permits in Jefferson County was higher for the first quarter of 1974 than for the first quarter of 1973.

Despite the apparent sluggishness of output and sales, employment expanded fairly steadily throughout the five-county metropolitan area (Floyd and Clark Counties in Indiana, Jefferson, Bullitt, and Oldham Counties in Kentucky) during 1973. However, employment, too, declined during the first quarter of 1974. In 1972 metropolitan area employment had increased by 20,100 workers, a rise of 6.1 percent above the January 1972 level. During the first seven months of 1973 employment grew by another 12,000 but then leveled off, and only 1,500 more jobs were added by the end of 1973. In March 1974 the number of employed workers was only 7,000 more than a year earlier, and it was nearly 6,000 less than the December 1973 employment total.

Nevertheless, the unemployment situation actually improved in 1973, with the unemployment rate averaging only 3.4 percent; the 1972 unemployment rate was 4.4 percent. A low of 2.9 percent was reached last October, but the unemployment rate increased to 3.7 percent in the first quarter of this year.

The Indiana portion of the metropolitan area followed a similar pattern, although, as usual, the unemployment rates were higher. In Floyd and Clark counties, 1972 unemployment averaged 6.8 percent of the labor force; the 1973 average was a much healthier 4.6 percent, and the first quarter of 1974 averaged 5.0 percent. Total employment in the two Indiana counties increased by 4,400 workers (a gain of more than 10 percent) in 1972 and by another 2,500 workers in the first half of 1973, but employment fell by 1,000 workers during the second half of last year. However, unlike the rest of the metropolitan area, the two counties recorded an increase of 1,200 jobs during the first quarter of this year.

The recent energy crisis seems to have had a very limited impact on the local economy. Although transportation problems and materials shortages caused a significant number of workers to be laid off for brief periods of time (a few days to about two weeks) and led to reductions in hours worked per week, there were only 300-400 unemployment claims of a long-term nature traceable to energy problems in the entire metropolitan area and only 30-40 such claims were filed in Floyd and Clark Counties. While output and sales did slacken and decline during the embargo months, the indexes given in the table show that the slowing trend was well under way by October.

Some definite impact was felt in specific sectors. For the first ten months of 1973, the number of automobiles and trucks sold was 8.4 percent higher than sales in the corresponding period of 1972. From November 1973 through March 1974 car and truck sales were 10 percent below the preceding year's sales. Recreational vehicle sales also fell sharply, and some gas stations closed. Gas and electricity consumption was below the previous year's level, but the decrease was due in part to the mild winter.

During the next few months there should be modest gains in some sectors of the local economy. Construction activity, for example, has already picked up and should remain fairly

strong, as work continues on the nearly 1,000 homes, damaged or destroyed by the April 3 tornadoes. In Floyd County construction should soon begin on a high-rise apartment building for the elderly and several industrial park buildings, including a \$4,800,000 glass container plant. However, unless the national economy gains unexpected momentum, the Louisville area economy is likely to continue along the plateau reached in 1973, with sales rising in value rather than in volume and with modest increases in both employment and unemployment.

SOUTH BEND-ELKHART

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The South Bend area apparently survived the first quarter, 1974 dip with minimal severity. February's data showed general activity equivalent to last autumn or even better, as measured by some indicators. Nonagricultural employment in February was actually 4 percent above the fourth quarter, 1973 average, but unemployment stood at 4.8 percent, well over last autumn. This percentage, however, was a reduction from the 5.0 percent of January. The March estimate shows continued improvement with a level of 4.4 percent.

Elkhart, of course, with its heavy concentration of production in mobile homes and recreational vehicles, found the gasoline crisis devastating in terms of jobs. Some estimates were well into two-digit unemployment percentages. Bank debits for Elkhart by February were off about 6 percent from the average activity of last autumn, whereas South Bend's was up 3 percent over the autumn average. Elkhart's

industrial electricity and natural gas sales showed no remarkable change, however, from the autumn levels. In terms of the latter indicators, conditions are similar to those in February of 1973.

Although new truck sales were off in February almost 8 percent from their fourth quarter, 1973 average, auto sales are up 17 percent, relieving some of the extraordinary inventory pressure dealers were suffering recently in autos and parts. The recreational vehicle (RV) industry also is enjoying sunnier days. Nevertheless, the public is still somewhat concerned with the size of cars, and the RV industry must come up with some design solutions for higher gas prices.

St. Joseph County housing starts, in terms of estimated value based on 1967, are only three-quarters of their rate a year ago, but they moved up 45 percent from January to February and 30 percent over last autumn. However, the question is whether this is a sustainable rate, in view of higher and increasing interest rates, and whether it is representative, since it does not include South Bend and Mishawaka.

All in all, the South Bend area appears to have experienced more stability through the oil crisis—in terms of industrial electricity production, bank debits, nonagricultural employment,

and unemployment—than the state and nation. The gasoline allocation crisis did not hit until late February and well into March, but South Bend service stations, even after the end of the Arabian restrictions, were closing after only a few hours of gasoline sales on weekdays and completely on weekends.

Although gasoline prices, unless Congress rolls them back, will stay high, the prospect of gasoline rationing is no longer a pressure on mobile home sales and production. Therefore Elkhart can expect an industrial revival in the coming months. Interest rates and the long-run energy implications for the industry are still important negatives to consider, however.

Retail sales in downtown South Bend may be stimulated when the River Bend Plaza officially opens this summer. However, the downtown retail base has been seriously reduced and dislocated by the project itself and more important, by the development of the Scottsdale Mall, which enjoys more retail traffic than downtown South Bend. Indeed, the downtown area may have to depend on its commercial base more than its retail sales for its economic viability.

For the most part, the outlook in the area—like the nation's—appears fundamentally sound, although not spectacular.

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Indiana's Gross Domestic State Product, 1954-72

Henry Fishkind

1

The 1973 Tax Package

Sales Tax Revision

6

Changes by the 1974 Legislature

7

Donald W. Kiefer

Hoosiers-Where Do They Come From
and Where Do They Go?

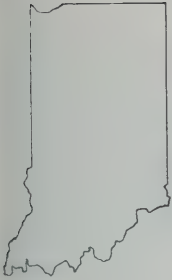
Cynthia Yasinski

10

New Income Projections

16

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Indiana's Gross Domestic State Product, 1954-72

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There are many measures of economic well-being—GNP (gross national product), personal income, employment, and consumption per capita, to name a few. The most widely used of these is GNP, the market value of the total net production of final goods and services. GNP is the most encompassing of the economic measures; in fact, it is considered to be the only measure of the total level of economic activity for the nation.

Other indexes are limited in scope. Personal income, for example, is an important measure, being closely linked to final consumption expenditures, but it only measures income received by the household sector of the economy and ignores the other three sectors—business, foreign, and government. Thus, personal income is neither a production measure nor a measure of the output of goods and services available for consumption, investment, or export.

To date there is no measure of the level of total economic activity for the State of Indiana

(that is, gross state product). Gross state product (GSP) as the state analogue of GNP measures the market value of all final goods and services produced by the state's economy. GSP can be used in much the same way as GNP—as the basic measure of economic activity, for planning and development, and for comparative purposes (as we shall demonstrate). Before discussing the calculation of GSP, it will be helpful to briefly examine the measurement of GNP.

GNP is measured in three ways. First, GNP is equal to the market value of the final net production of all goods and services or, more simply, total expenditures. For the purpose of measuring gross output, the economy is often partitioned into eleven industrial categories: farm, mining, construction manufacturing, trade, finance-insurance-real estate, transportation-communication-utilities, services, government, other, and foreign. The summation of each sector's contribution to GNP measured on a value-added basis provides a second measure

of GNP. Finally, GNP represents the total payments to all factors of production, or national income, plus depreciation and indirect business taxes.

Like GNP, GSP could be calculated in three ways. GSP is equal to gross expenditures on state output ($C + I + G + X - m$); gross state income by type plus depreciation and indirect taxes; and the value added by industrial sector.¹ Although not all of the necessary data are available at the state level to fully implement any of these approaches, some methods are more promising than others. A gross expenditures approach is not applicable because the necessary data on a state's exports and imports are not collected. To measure gross state income by type would require data on capital consumption allowances and indirect business taxes, which are not available at the state level. However, these could be estimated and, in fact,

1. $C + I + G + X - m$ is the standard Keynesian income identity where C = Consumption; I = Investment; G = Government; and $X - m$ = Net exports. For a full discussion of income identity, see Edward Shapiro, *Macroeconomic Analysis*, 2nd ed. (New York: Harcourt, Brace & World), 1970.

are estimated as a by-product of the Kendrick-Jaycox technique.

This method was developed for estimating gross domestic state product (GDSP) using the value-added by industrial sector.² GDSP is similar to GSP except that GDSP measures only the output of factors of production lying within the state, regardless of their owner's residence, and excludes all net remissions from abroad. GSP would include net payments from outside the state. In practice, the difference between GSP and GDSP is small. Furthermore, GDSP is preferable for the purposes of measuring the productivity of a state's economy because all economic activity in the region is included.

To implement the value-added approach to GDSP, we must sum the value-added of each of the industrial sectors (the foreign sector is, of course, excluded in measuring GDSP). For the farm sector, value-added can be estimated

2. John W. Kendrick and C. Milton Jaycox, "The Concept and Estimation of Gross State Product," *Southern Economic Journal*, XXXII (October 1965), pp. 153-68.

INDIANA BUSINESS REVIEW

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directly from the data on net farm income (that is, the value of gross farm output minus intermediate expenses) which is available by state.³ The value of gross government product is defined by the U.S. Commerce Department as being equal to the total compensation of government employees. This can be estimated in a straightforward manner. Government wages and salary data are published by state; the supplements and fringe benefits can be estimated using the national ratio (about 10 percent) applied to the state wage and salary data for each year.⁴ All levels of government are included in our estimates of gross government product.

The estimation of value-added for the private, nonfarm industrial sectors is somewhat more intricate. From the preceding discussion of the measurement of GNP, we know that national income plus capital consumption plus indirect business taxes equals GNP. If each of these three components were broken down by industrial sector, their total would be the value-added by each industrial sector. For example, national income originating in manufacturing plus capital consumption allowances in manufacturing and manufacturing's indirect business taxes equals the value-added by the manufacturing sector. We can estimate the income originating from the various sectors of the state's economy from the data on personal income by state and by industry published by the Commerce Department using the following computational formula:

State Income
Originating =
in Sector i

$$\frac{\text{Income Originating in Sector } i \text{ for the U.S.}}{\text{Income Received by Persons from Sector } i \text{ for the U.S.}} \times \frac{\text{Income Received by Persons from Sector } i \text{ for the State}^5}{\text{Income Received by Persons from Sector } i \text{ for the State}^5}$$

To arrive at the value added for the sector, we also need estimates of capital consumption

allowances and indirect business taxes. These are estimated as follows:

$$\frac{\text{State Income Originating in Sector } i}{\text{Capital Consumption in Sector } i \text{ for the U.S.} + \text{Indirect Business Taxes in Sector } i \text{ for the U.S.}} \times \frac{\text{National Income Originating in Sector } i \text{ for the U.S.}}{\text{National Income Originating in Sector } i \text{ for the U.S.}}$$

The national ratios must be used here because data on capital consumption and indirect business taxes by industry are only available at the national level. Thus

$$\text{GDSP} = \frac{\text{Farm Value Added}}{\text{Government Output}} + \frac{\text{Government Output}}{\text{Government Output}} + \sum_{i=1}^8 \frac{\text{Indirect Business Taxes in Sector } i \text{ for the U.S.}}{\text{Indirect Business Taxes in Sector } i \text{ for the U.S.}}$$

$$\left[\text{State Income Originating in Sector } i \left(1 + \frac{\text{Capital Consumption in Sector } i \text{ for the U.S.} + \text{Indirect Business Taxes in Sector } i \text{ for the U.S.}}{\text{National Income Originating in Sector } i \text{ for the U.S.}} \right) \right]$$

Table 1 presents our estimates of Indiana's gross state domestic product from 1954 to

3. U.S. Department of Agriculture, *Farm Income State Estimates*, Farm Income Situation, Supplements 211 and 222 (Washington: U.S. Government Printing Office).

4. U.S. Department of Commerce, *Survey of Current Business* (Washington: U.S. Government Printing Office), published each August.

5. Since data for personal income by industry and by state only include figures for wages and salaries and not total income received (which would include supplements and fringes), we substituted the available data on wages and salaries for the unavailable income-received component. Thus the formula we actually used was:

$$\frac{\text{State Income Originating in Sector } i}{\text{National Income Originating in Sector } i \text{ for the U.S.}} \times \frac{\text{Wages and Salaries for Sector } i \text{ in Indiana}}{\text{Wages and Salaries for Sector } i \text{ in the U.S.}}$$

TABLE 1

Indiana Gross State Domestic Product by Industrial Sector, 1954-72
(in millions of current dollars)

Year	Farm	Mining	Contract Con- struction	Manu- facturing	Trade	Finance, Insurance, Real Estate	Trans- portation, Com- munication, Utilities	Services	Govern- ment	Other	Total
1954	\$515.1	\$ 99.9	\$ 364.6	\$ 4,045.5	\$1,579.9	\$ 798.3	\$ 836.9	\$ 617.8	\$1,097.1	\$1,356.0	\$11,311.1
1955	374.3	113.2	456.5	4,805.2	1,678.1	842.9	929.0	660.1	1,107.5	1,323.0	12,289.9
1956	375.5	122.2	536.1	4,864.5	1,760.9	915.2	975.9	690.7	1,203.7	1,335.0	12,779.7
1957	382.6	117.1	566.2	5,088.4	1,851.2	1,059.1	1,017.6	785.7	1,318.8	1,520.0	13,706.7
1958	422.9	113.7	551.9	4,599.4	1,811.1	1,118.4	1,000.2	794.6	1,399.1	1,536.0	13,347.2
1959	302.3	125.4	531.7	5,350.5	2,167.1	1,211.3	1,083.5	850.4	1,503.0	1,496.0	14,621.1
1960	360.6	128.8	577.8	5,441.5	2,018.1	1,297.9	1,135.5	928.8	1,618.0	1,552.0	15,059.0
1961	466.7	129.5	536.1	5,338.9	2,039.4	1,363.5	1,151.5	961.8	1,732.6	1,660.0	15,379.1
1962	459.6	131.2	526.5	5,996.1	2,179.2	1,421.8	1,198.4	1,023.4	1,824.3	1,710.0	16,470.5
1963	486.1	147.2	583.9	6,567.9	2,250.0	1,632.8	1,258.1	1,058.1	1,986.9	1,830.0	17,800.9
1964	304.0	144.2	730.1	7,082.3	2,395.7	1,768.2	1,330.4	1,133.8	2,162.9	1,777.0	18,828.6
1965	582.3	134.7	834.4	8,005.3	2,606.9	1,907.5	1,475.3	1,242.6	2,378.6	2,132.0	21,299.5
1966	523.7	134.3	921.9	8,788.9	2,859.2	2,074.7	1,559.1	1,363.6	2,637.7	2,286.0	23,109.7
1967	483.5	134.5	1,000.4	8,783.8	3,045.5	2,214.5	1,610.9	1,490.3	2,944.8	2,310.0	24,058.6
1968	453.7	145.2	1,048.9	9,582.9	3,291.5	2,361.4	1,718.1	1,642.2	3,142.0	2,375.0	25,760.9
1969	632.2	146.1	1,230.6	10,108.9	3,604.7	2,539.8	1,823.6	1,825.9	3,339.2	2,853.0	28,104.1
1970	430.2	158.0	1,179.5	9,845.7	3,772.6	2,681.9	1,904.8	1,979.4	3,610.1	2,710.0	28,273.1
1971	639.8	150.2	1,181.5	10,457.3	4,029.7	2,930.7	2,098.5	2,117.2	3,927.4	3,097.0	30,629.3
1972	638.6	172.2	1,306.6	11,536.5	4,274.8	3,122.4	2,333.5	2,303.3	4,340.7	3,375.0	33,403.5

*Other = Other labor income, other industries, and nonfarm proprietors' income.

TABLE 2

Indiana Gross State Domestic Product as Percentage of U.S. Gross National Product by Industrial Sector

Year	Farm	Min- ing	Contract Con- struction	Manu- factur- ing	Trade	Trans- portation, Com- munication, Utilities	Finance, In- surance, Real Estate	Ser- vices	Indiana GSDP <div>U. S. GNP</div>
1954	2.63%	0.92%	2.18%	3.81%	2.60%	2.46%	1.87%	1.99%	3.10%
1955	1.99	0.92	2.54	3.98	2.53	2.36	1.93	1.91	3.09
1956	2.02	0.91	2.68	3.84	2.50	2.39	1.91	1.82	3.05
1957	2.08	0.87	2.71	3.87	2.51	2.63	1.85	1.93	3.11
1958	2.03	0.92	2.67	3.72	2.41	2.75	1.69	1.85	2.98
1959	1.54	1.03	2.38	3.79	2.64	2.78	1.71	182	3.02
1960	1.76	1.01	2.54	3.77	2.39	2.85	1.68	186	2.99
1961	2.23	1.00	2.29	3.70	2.34	2.90	1.61	182	2.96
1962	2.17	1.01	2.11	3.78	2.35	2.84	1.57	180	2.94
1963	2.26	1.12	2.21	3.93	2.31	3.09	1.56	1.74	3.01
1964	1.49	1.08	2.54	3.94	2.29	3.14	1.54	1.71	2.98
1965	2.45	1.00	2.64	4.03	2.32	3.16	1.58	1.73	3.12
1966	1.94	0.96	2.66	4.03	2.34	3.20	1.54	1.72	3.08
1967	2.15	0.99	2.77	3.92	2.34	3.26	1.49	1.71	3.03
1968	1.81	1.02	2.66	3.89	2.31	3.21	1.47	1.72	2.98
1969	2.27	0.96	2.77	3.96	2.30	3.21	1.42	1.74	3.02
1970	1.49	0.93	2.53	3.90	2.27	3.20	1.38	1.74	2.89
1971	2.10	0.93	2.33	3.98	2.22	3.17	1.38	1.74	2.90
1972	1.86	0.95	2.33	3.97	2.20	3.05	1.42	1.73	2.89

1972 by industrial sector. As expected, manufacturing is by far the most important sector, being almost three times as large as the next largest sector, trade. Government, services, and finance-insurance-real estate, while relatively small, have been growing in importance since 1954. This reflects the national trend toward increasing tertiary activities. However, farming, mining, transportation-communication-utility, and trade are becoming less important, while manufacturing and construction have maintained relatively stable shares of GDSP since 1954.

It is interesting to compare Indiana's economy to that of the nation. The most striking differences on a relative basis are that Indiana's economy has a significantly larger manufacturing sector and significantly smaller trade,

finance-insurance-real estate, and services sectors than the United States. Northern Indiana's extensive industrial enclave needs no discussion here. However, we might wonder why Indiana with such a large manufacturing sector has such a small tertiary sector (trade and finance). One possible explanation for this phenomenon may be the existence of three large urban areas on the state's borders; Chicago, Louisville, and Cincinnati may have attracted some of the tertiary activities from the state's economy.

Table 2 shows the percentages of GNP which are produced in Indiana by industrial sector. Looking down any column we can see how Indiana's economy has developed vis-a-vis the nation. In the last column we see that since 1954, Indiana's economy has grown somewhat

more slowly than the nation's with its share of GNP declining from 3.10 percent to 2.89 percent. Furthermore, we note that Indiana has expanded its GNP share of manufacturing and transportation-communication-utilities, while most of the other sectors of the state's economy have contracted their shares. In the face of the relatively slower growth of its economy, it is most noteworthy that Indiana has increased its GNP share of both manufacturing and

transportation-communication-utilities output since 1954.

In summary, this article has provided estimates of Indiana's GDSP from 1954-1972. GDSP estimates are valuable because they serve as the basic measure of economic activity, as a forecasting input, and as a guide in effective planning for both businessmen and government. Finally, we have explored a few avenues to which these GDSP estimates can be applied.

The 1973 Tax Package

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Director, Commission on State Tax and Financing Policy

Sales Tax Revision

The 1973 tax package changed the sales tax rate, the base of the tax, its administration, and the use of sales tax revenue. The rate of the sales tax was increased from 2 percent, which it had been since its adoption in 1963, to 4 percent.

The new sales tax brackets are shown in Table 1. The higher tax rates applied to sales occurring on or after May 1, 1973 (the date of sale is determined by the delivery date or date of payment, whichever is earlier), except for sales of public utility services. For these services, the higher tax rates applied to billings dated on or after June 1, 1973.

The most significant change of the sales tax base was the exemption of selected grocery items. Prior to the 1973 tax package, the sale of

TABLE 1

Tax Brackets for 4 Percent Indiana Gross Retail (Sales) Tax

<i>Amount of Transaction</i>	<i>Amount of Tax</i>
\$0.00-0.15	\$0.00
0.16-0.37	0.01
0.38-0.62	0.02
0.63-0.87	0.03
0.88-1.12	0.04
1.13-1.37	0.05
1.38-1.62	0.06
1.63 or more	4 percent of amount of transaction rounded to the nearest penny

all food items had been taxable, and taxpayers were given a "sales tax credit" of \$8 per exemption against their individual income tax liability. The credit was abolished for taxable years beginning on or after January 1, 1973, and the food exemption was substituted. The exemption applies only to food sold for human consumption and includes cereal, milk, meat, fish, eggs, vegetables, fruit, sugar and sugar substitutes, coffee and its substitutes, tea, cocoa, spices, margarine, and most products made from these items. Not included in the exemption are candy, confectionery, chewing gum, alcoholic beverages, cocktail mixes, soft drinks, medicines, dietary supplements, water and ice, food sold through vending machines or by street vendors, and prepared food or meals sold for immediate consumption on or off the retail merchants' premises.

A new exemption from the sales tax was also granted for sales of artificial limbs or orthopedic devices prescribed by a physician. The exemption of materials to be used in the construction of speculatively built single-family homes was terminated as of September 1, 1973. Also, the exemption from sales tax of all goods purchased by public utilities was restricted to an exemption for purchases of goods to be used directly in the production of the utility service.

The 1973 tax package contained two administrative changes. The *first* is a simplification of the procedure to be used by retail merchants in determining the nontaxable proportion of their gross retail sales (sales of items priced less than \$.16). The simplification involves allowing merchants to apply a ratio to their total sales in order to estimate nontaxable sales. The ratio is to be determined by sampling the merchants' sales during the first quarter of the tax year, according to a procedure specified by the State Department of Revenue.

The *second* administrative change is an allowance to grocers for the extra expense associated with separating taxable from nontaxable sales items (the grocery industry main-

TABLE 2

Sales Tax Expense Allowance for Grocers

<i>Gross Sales of Exempt Food</i>	<i>Expense Allowances</i>
Up to \$50,000	.20%
\$50,000 to \$500,000	.10
In excess of \$500,000	.05

tained that special cash registers would have to be installed to handle these transactions and keep proper accounting records). The allowance period began May 1, 1973 and will end December 31, 1974, and this allowance may be claimed only by merchants whose sales of taxable items and of exempt food items both exceed 10 percent of total sales. The allowance schedule, which is based on the gross sales of exempt food, is shown in Table 2. The allowance is to be computed by the merchant and deducted from the sales tax collections remitted to the Department of Revenue.

One-half of the sales tax revenue collected on or after May 1, 1973 is to be deposited in the Property Tax Relief Fund and is the major source of revenue for the state's 20 percent property tax relief credit, as described in the first article in this series [*Indiana Business Review*, May-June 1973]. The other half is to be deposited in the general fund, which is where all sales tax collections were deposited prior to May 1, 1973.

Changes by the 1974 Legislature

The 1974 Indiana General Assembly made several changes in the provisions of the 1973 tax package, which affect local government finance and local school finance. Two of the changes concerning local government finance had been recommended by the Commission on

State Tax and Financing Policy. The recommendations were to change the adoption date for the local option income tax and to dedicate the interest earned on local option revenue, while being held in the state treasury, to the benefit of the counties imposing the tax.

The change in the local option tax adoption date was recommended because the original adoption and revenue distribution schedules did not coordinate properly [*Indiana Business Review*, September-October 1973]. The adoption schedule called for county councils to vote prior to July 1 of any year to impose the tax as of January 1 of the following year. However, the revenue distribution schedule mandated distributions of revenue collected during the previous *fiscal* year (July 1 to June 30) on a *calendar* year basis (on May 1 and November 1). Because a newly adopted tax would go into effect in the middle of the fiscal year (on January 1), all counties imposing the tax in 1974 or after would have received only one-half year's revenue collections in the first year under the tax. However, despite receiving only one-half the anticipated revenue, the local governments in the county would still come under the stricter property tax controls for local option counties.

Local civil governments in Hendricks, Newton, and Steuben Counties are experiencing this problem during 1974 because their local option taxes went into effect on January 1, 1974. This date was in the middle of the 1973-74 fiscal year, which is the basis for local option tax revenue distribution to local governments during calendar year 1974. Therefore, local governments in these counties must operate within the property tax controls for adopting counties, but they receive local option tax revenue from only one-half year's collections (January 1 to June 30). This problem was remedied by requiring county councils to vote prior to April 1 to impose the local option income tax in their county beginning on July 1 of that year.

The change which dedicated the interest earned on local option tax revenue to the counties imposing the tax was required because of an omission in the original version of the tax package. The bill that created Indiana's Property Tax Replacement Fund, from which the state's 20 percent property tax credit is paid, contained the statement, "Any amount earned on moneys deposited in the Property Tax Replacement Fund shall remain in and become part of the Property Tax Replacement Fund."

Many people thought a similar provision had been included for the County Adjusted Gross Income Tax Fund (the state fund in which county local option income tax collections are deposited prior to distribution to the counties), but it had not. The result was that interest earned on county local option income tax collections from the time of collection (beginning in July) until the time of distribution to the local governments (in May and November of the following year) would have gone to the state general fund. This was changed in 1974, and now interest earned on local option income tax collections, while being held by the state treasurer, becomes part of the County Adjusted Gross Income Tax Fund for eventual distribution to the local option counties.

In addition to these changes, three revisions were made in the property tax controls on local civil governments. Permission was given to the Local Government Tax Control Board to recommend, and the State Tax Board to put into effect, the substitution of a taxing unit's average property tax levy for 1970, 1971, and 1972 for its 1973 levy (if the average is higher than the 1973 levy) for the purpose of determining the limits on future property tax levies. The reason for this change is to grant relief from the controls to any local civil government that for some reason had an unusually low and inadequate property tax levy in 1973.

Permission was also granted to the tax boards to allow a tax levy above the controlled

limits if such a levy is necessary to pay operation and maintenance of a new or expanded capital facility which was under construction on July 1, 1973 and was not built as a replacement for an existing capital facility. This exception was provided because, in some cases, capital facilities that were under construction when the property tax controls went into effect could not be used if additional tax revenue for operation and maintenance were not made available. Finally, the State Tax Board was given authority to alter the property tax control limits of any governmental unit for which the property tax had been erroneously computed in 1973. The language of the original controls created doubt as to whether the board could correct errors in computing the frozen tax levies.

Five changes were made by the 1974 General Assembly in the effects of the tax package on local schools [*Indiana Business Review*, January-February 1974]. *First*, the amount of the supplemental flat grant was increased to \$38 per student in average daily membership (ADM) in 1974 and \$77 per ADM in 1975. This was an increase from \$36 and \$74, respectively.

Second, the formula for the supplemental equalization grant was revised so that a change in assessed valuation of the school corporation would not alter the amount of the state grant

received. This was done by subtracting \$2.80 multiplied by each \$100 of the school corporation's adjusted assessed valuation for the March 1, 1972 assessment, rather than by using the current adjusted assessed valuation.

Third, the limit on school cumulative building fund tax levies was returned to a tax rate no greater than \$1.25 per \$100 assessed valuation (the limit prior to 1973), rather than to a rate no higher than that levied in 1973. The operation of the fund and levying of the tax remain subject to the same review and approval of the School Control Board and State Tax Board.

Fourth, school corporations were forbidden from levying a property tax to pay for bonded indebtedness or lease rentals incurred after June 30, 1974, unless approval of the State Board of Tax Commissioners has been obtained prior to the transaction. A similar provision for local civil governments was included in the original 1973 tax package. *Fifth*, in an amendment resembling one for municipal governments, the State Tax Board was given authority to change the tax limits for school corporations in which errors had been made in computing the 1973 tax.

EDITOR'S NOTE: This article is the sixth in a series summarizing various aspects of the tax package passed by the 1973 General Assembly.

Hoosiers—Where Do They Come From and Where Do They Go?

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Americans are movers. Nearly half of the U.S. population changed residence between 1965 and 1970. More precisely, 1970 census figures report that 47 percent of the American people, 5 years of age or older, were living in houses different from those they occupied in 1965.

For Indiana, the comparable figure was 46.2 percent, revealing only a bit less tendency to pack up and seek new accommodations and opportunities. (Of the nearly 1.9 million Hoosiers whose 1970 residence was different from that of 1965, over 211,000 did not report where they had previously lived, and more than 30,000 were living outside the United States in 1965). Of the five states in the East North Central region of the country, Indiana had the highest percentage of movers, with Illinois, Ohio, Michigan, and Wisconsin trailing in that order.

For the vast majority of those 1.9 million 1970 Indiana residents who moved to a different house between 1965 and 1970, the move was a local one. As shown in Table 1, 1.2 million of these movers did not leave the county. Such moves are modest, but they are important to the family members themselves, their real estate agent, their local school, their telephone company, and the hardware store

where they buy new curtain rods. Of Indiana residents who moved, 62 percent did not leave the county, compared to the lower 58 percent figure for the nation.

The movement of families across county and, particularly, state and regional boundaries has an impact upon an area's labor force, businesses, and public services that is different from the local move. This article focuses on the origins and destinations of Hoosier interstate migrants, those 758,000 persons who either left or entered Indiana between 1965 and 1970.

OUT-MIGRATION

When families move from one state to another they are more likely to go to a nearby state than to a distant one. About 8 percent of Indiana's 1965 population was living in a different state in 1970. Of these 400,000 former Hoosiers, about 40 percent remained in the North Central part of the country. Thirty-five percent moved to the South, while only 8 percent and 16 percent settled in the more distant Northeastern and Western regions of the country (see map).

For the large number of migrants who stayed in the central part of the country, the four states surrounding Indiana were the most

Regional Migration Flows

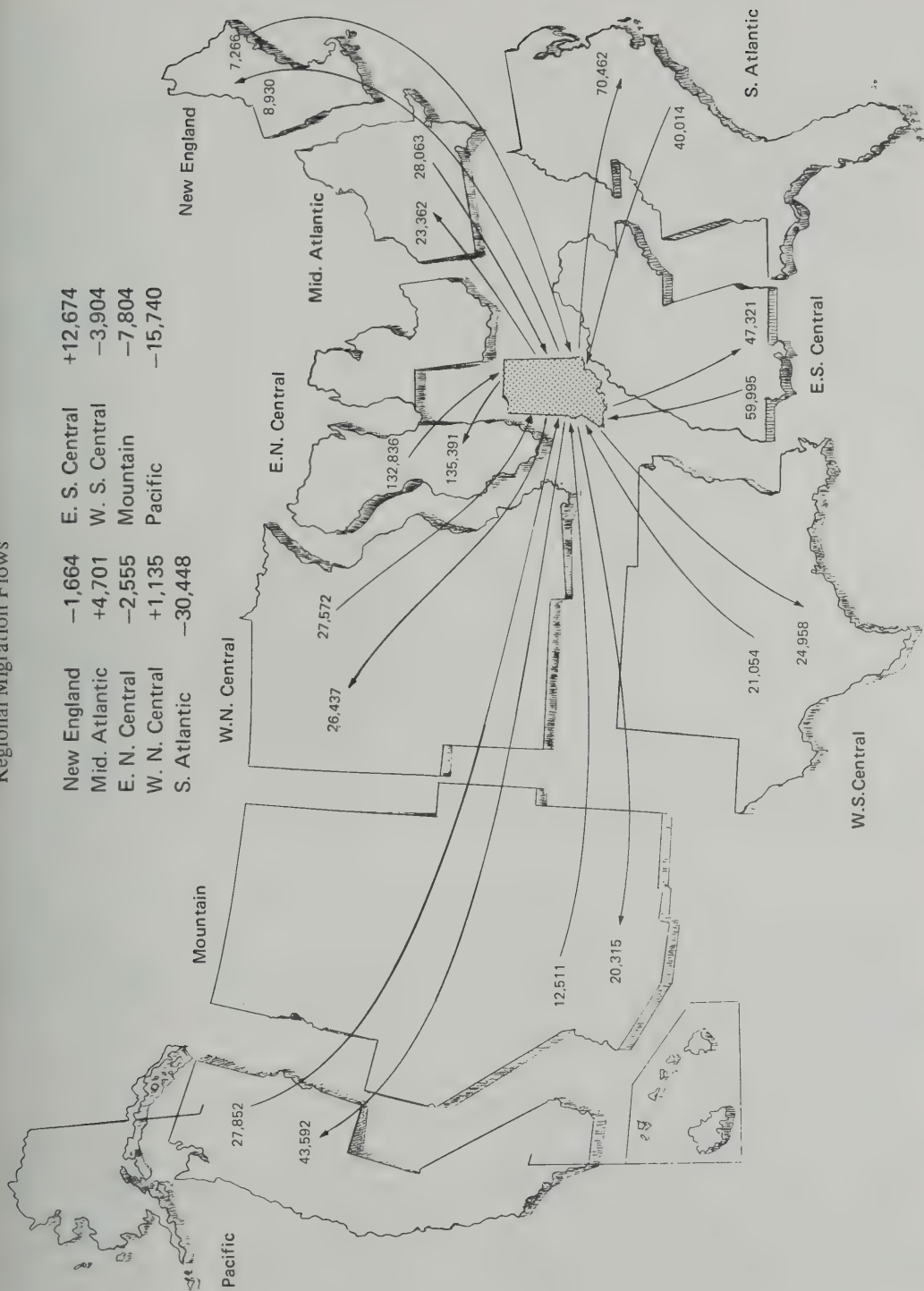


TABLE 1

Mobility Status for Population 5 Years Old and Over, 1965-70*
(in thousands)

	<i>1970 Total Population 5 Years and Older</i>	<i>Did Not Move</i>	<i>Moved in Same County</i>	<i>Same State Moved to Different County</i>	<i>Moved to Different State</i>	<i>Moved; 1965 Residence Abroad or Not Reported</i>
U.S.	186,094	98,564	43,357	15,656	16,080	12,437
Illinois	10,175	5,491	2,723	624	658	677
Indiana	4,738	2,549	1,210	381	357	242
Kentucky	2,949	1,579	772	205	222	170
Michigan	8,071	4,464	1,919	758	490	440
Ohio	9,700	5,332	2,534	708	613	544
Wisconsin	4,036	2,332	896	354	246	207

(As a Percentage)

U.S.	100%	53.0%	23.2%	8.3%	8.6%	6.6%
Illinois	100	54.0	26.8	6.1	6.4	6.6
Indiana	100	53.8	25.5	8.0	7.5	5.1
Kentucky	100	55.2	27.6	6.9	6.9	6.9
Michigan	100	55.3	23.7	9.3	6.0	5.5
Ohio	100	54.8	26.0	7.3	6.3	5.6
Wisconsin	100	57.8	22.0	8.7	6.1	5.0

*Details may not add to totals because of rounding.

SOURCE: U.S. Bureau of the Census, *1970 Census of Population: Migration Between State Areas*, PC(2)-2E, (Washington: U.S. Government Printing Office, July, 1972).

popular destinations. About 38 percent of Indiana's out-migrants settled in these four states, the greatest number going to Illinois, with Ohio, Michigan, and Kentucky following in that order.

Table 2 indicates that another large group, 24 percent of the movers, settled in the "Sunshine States"—Arizona, California, Florida, and Texas. Except for neighboring Illinois, Ohio, and Michigan, more people left Indiana to go to either Florida or California than to any other state. It appears that while some Hoosiers are drawn most strongly to nearby states,

others seek warm climates that promise year-round leisure activities and comfortable retirement homes.

IN-MIGRATION

To residents of Indiana, the people moving into the state may be of more immediate interest than those leaving. About 7.5 percent of our 1970 residents lived in other states in 1965, and almost half of these came here from the North Central region. The South contributed about 34

TABLE 2

Indiana Migration, 1965-70

Migration Between Indiana and Divisions

Division	In-Migration		Out-Migration	
	Number of In-Migrants	Percent of In-Migrants	Number of Out-Migrants	Percent of Out-Migrants
Northeast	35,329	9.9	32,292	8.1
North Central	160,408	44.9	161,828	40.4
South	121,063	33.9	142,741	35.6
West	40,363	11.3	63,907	15.9

Migration Between Indiana and Selected States

(Surrounding States)	163,580	45.8	154,641	38.6
Illinois	58,398	16.4	51,560	12.9
Kentucky	38,223	10.7	28,288	7.1
Michigan	26,215	7.3	36,433	9.1
Ohio	40,744	11.4	38,360	9.6
Sunshine States	50,541	14.2	96,769	24.1
Arizona	4,123	1.2	9,582	2.4
California	22,180	6.2	35,343	8.8
Florida	12,348	3.5	36,696	9.2
Texas	11,890	3.3	15,148	3.8

TABLE 3

Highest Net Gains and Losses During 1965-70 to Indiana

State	Net Gain
Kentucky	+9,935
Illinois	+6,838
Pennsylvania	+2,728
Ohio	+2,384
West Virginia	+2,120
State	Net Loss
Florida	-24,348
California	-13,163
Michigan	-10,218
Arizona	-5,459
Texas	-3,258

TABLE 4

Selected Migratory Exchange Ratios with Indiana, 1965-70

State	Migratory Exchange Ratios
West Virginia	1.80
South Dakota	1.59
Maine	1.55
Kentucky	1.35
Illinois	1.13
Ohio	1.06
Michigan	.72
Washington	.52
Arizona	.43
Florida	.34

TABLE 5

Interstate Migrants, 1965-70

	<i>Number of Migrants from Indiana to</i>	<i>Number of Migrants to Indiana from</i>	<i>Net Migration</i>	<i>Migration Exchange Ratio</i>
New England				
Maine	540	837	+297	1.55
New Hampshire	613	421	-192	.69
Vermont	356	435	+79	1.22
Massachusetts	3,782	2,834	-948	.75
Rhode Island	1,082	686	-396	.63
Connecticut	2,557	2,053	-504	.80
Middle Atlantic				
New York	9,684	10,821	+1,137	1.12
New Jersey	4,664	5,500	+836	1.18
Pennsylvania	9,014	11,742	+2,728	1.30
East North Central				
Ohio	38,360	40,744	+2,384	1.06
Indiana	—	—	—	—
Illinois	51,560	58,398	+6,838	1.13
Michigan	36,433	26,215	-10,218	.72
Wisconsin	9,038	7,479	-1,559	.83
West North Central				
Minnesota	4,642	4,135	-507	.89
Iowa	4,064	5,553	+1,489	1.37
Missouri	10,688	9,092	-1,596	.85
North Dakota	886	905	+19	1.02
South Dakota	642	1,019	+377	1.59
Nebraska	1,427	2,100	+673	1.47
Kansas	4,088	4,768	+680	1.17
South Atlantic				
Delaware	808	616	-192	.76
Maryland	5,299	4,025	-1,274	.76
D.C.	770	908	+138	1.18
Virginia	8,779	7,404	-1,375	.84
West Virginia	2,642	4,762	+2,120	1.80
North Carolina	5,972	3,946	-2,026	.66
South Carolina	2,840	1,881	-959	.66
Georgia	6,656	4,124	-2,532	.62
Florida	36,696	12,348	-24,348	.34
East South Central				
Kentucky	28,288	38,223	+9,935	1.35
Tennessee	10,951	12,327	+1,376	1.13
Alabama	5,363	5,265	-98	.98
Mississippi	2,719	4,180	+1,461	1.54

Continued on page 15

TABLE 5, *continued*

	<i>Number of Migrants from Indiana to</i>	<i>Number of Migrants to Indiana from</i>	<i>Net Migration</i>	<i>Migration Exchange Ratio</i>
West South Central				
Arkansas	3,010	3,829	+819	1.27
Louisiana	3,217	2,449	-768	.76
Oklahoma	3,583	2,886	-697	.81
Texas	15,148	11,890	-3,258	.78
Mountain				
Montana	578	809	+231	1.40
Idaho	720	516	-204	.72
Wyoming	520	676	+156	1.30
Colorado	5,767	3,180	-2,587	.55
New Mexico	1,673	1,471	-202	.88
Arizona	9,582	4,123	-5,459	.43
Utah	903	1,020	+117	1.13
Nevada	572	716	+144	1.25
Pacific				
Washington	3,973	2,081	-1,892	.52
Oregon	1,722	1,366	-356	.79
California	35,343	22,180	-13,163	.63
Alaska	1,083	974	-109	.90
Hawaii	1,471	1,251	-220	.85

percent of our new residents, compared to the smaller inflows of 10 percent and 11 percent from the Northeast and West.

Almost half of Indiana's 357,000 new citizens came from the four surrounding states. As Table 2 shows, Illinois was most likely to be the origin of an Indiana in-migrant, just as it was the most popular destination of all our out-migrants.

As a group, the Sunshine States do not account for a significantly large percentage of Indiana's 1970 population; however, it is interesting to note that there are more than twice as many in-migrants from California as from New York, despite the fact that California is much farther away, has a better climate, and had, in 1965, about the same population as New York.

NET MIGRATION

The give-and-take of population between Indiana and the rest of the country was fairly equal; 401,000 moved out while 357,000 moved in, a net loss of 44,000. Table 3 shows that the two largest net gains of population came from Kentucky and Illinois, states adjacent to Indiana. Other high net gains were also from relatively nearby states. The largest net losses of population, with the single exception of Michigan, were to the distant Sunshine States of Arizona, California, Florida, and Texas.

The states providing Indiana with the largest net gains are not necessarily those with which there is the greatest migratory exchange ratio. Table 4 shows that West Virginia, South Dakota, and Maine had the highest ratios of out-migrants to Indiana, compared to Hoosiers

entering those states. In other words, for every 100 Indiana residents who settled in West Virginia, 180 people from West Virginia moved into Indiana. It happens that two of the states to which Indiana lost the most people—Arizona and Florida—also have the lowest rates of exchange with Indiana. Approximately three times as many people moved from Indiana to Florida as from Florida to Indiana. Indiana's exchange ratio with its four surrounding states is fairly close to 1.

Where does all this coming and going leave us? We have a net gain of population from twenty-one states plus the District of Columbia, and a net loss to twenty-eight states. In general, we gained from the surrounding states and from the Northeast, and lost to the South and the West, in particular to the Sunshine States in those regions. The result was a loss of about 44,000 people due to migration, or less than 1

percent of Indiana's 1970 population over years of age (see Table 5 for details concerning the origins and destinations of Hoosier interstate migrants).

Ours is an era of high mobility, a period when most people can expect to move several times during their lives. Between 1965 and 1970 there was a slight tendency toward out-migration in Indiana, but it did not result in a significant loss of population. Indiana residents will continue to manifest the historic American determination to seek new economic opportunities, and we can expect about as many people to look for these opportunities within Indiana as elsewhere.

EDITOR'S NOTE: This is one of a series of articles on Indiana's population prepared under the general direction of Morton J. Marcus, research economist, Division of Research, School of Business, Indiana University.

NEW INCOME PROJECTIONS

The U.S. Department of Commerce is now projecting that the personal income of Indiana's residents will rise to \$5,975 per person by 1990 (and those are 1967 dollars). Preliminary estimates indicate that, in 1973, our per capita personal income was \$3,687 in 1967 dollars (\$4,908 in 1973 dollars). Thus, according to

the latest projections, the statistically average citizen of the state will experience a real increase of 62 percent in his or her income over the next seventeen years.

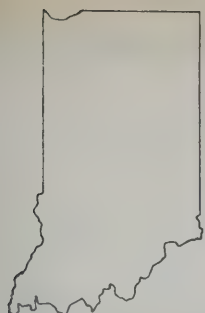
For the sake of invidious comparison, here is how we compare with the nation and neighboring states:

Per Capita Personal Income

	1973		1990	Percent
	Current Dollars	1967 Dollars	1967 Dollars	Increase, 1973-90 (1967 dollars)
United States	\$4,918	\$3,695	\$6,166	67
Indiana	4,908	3,687	5,975	62
Illinois	5,753	4,322	6,971	61
Kentucky	3,967	2,980	5,153	73
Michigan	5,439	4,086	6,538	60
Ohio	5,012	3,766	6,255	66

SOURCE: U.S. Department of Commerce, *Survey of Current Business* (April 1974), pp. 17, S-8, and 33.

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Indiana Business Review

Volume 49, No. 9

September 1974

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by William J. White, *State Analyst*

Mark C. Sanford, *Statistical Recorder*

UNITED STATES—INDIANA BUSINESS INDICATORS*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

UNITED STATES						INDIANA		
		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT								
Nonagricultural employment	July	116.8	117.0	114.6	July	114.1	113.5	113.1
Manufacturing employment	July	102.2	102.6	101.8	July	104.0	102.1	105.0
Average weekly hours (no.)	July	40.1	40.4	40.5	July	40.7	41.3	40.9
Average weekly earnings (\$)	July	176.44	176.95	164.43	July	206.35	208.47	191.00
Nonmanufacturing employment	July	123.4	121.3	120.4	July	120.9	120.3	118.5
Unemployment rate (%)	July	5.3	5.2	4.7	July	6.1	7.1	4.7
Unemployment rate—married males (%)	July	2.6	2.6	2.1	—	—	—	—
Continued unemployment claims	—	—	—	—	July	203.2	191.0	112.0
PRODUCTION								
Bituminous coal production	June	121.0	115.9	111.5	July	110.9	86.0	92.9
Industrial electricity production	May	141.7	142.0	140.6	—	—	—	—
Industrial electricity sales	—	—	—	—	June	138.4	139.9	138.7
Manufacturing production	July	125.5	125.3	126.5	June	133.7	133.3	133.0
Raw steel production	June	112.2	107.9	114.9	June	121.8	130.1	128.8
CONSTRUCTION								
Construction activity—total	June	175.6	176.1	173.9	June	174.3	172.7	185.2
Residential housing starts	July	103.4	123.8	167.5	June	147.9	148.7	164.0
Residential expenditures	June	195.0	195.8	229.3	June	259.8	250.3	275.6
Nonresidential expenditures	June	166.1	166.5	146.9	June	143.9	143.4	128.3
Public expenditures	June	143.0	143.0	122.3	—	—	—	—
Public works and utilities	—	—	—	—	June	124.5	120.7	164.5
OTHER INDICATORS								
Debits to demand deposits	June	302.8	308.6	250.6	—	—	—	—
Bank debits	—	—	—	—	June	268.3	301.2	212.7
Personal income per capita (\$)	June	5,391.44	5,359.5	4,847.26	1973 IV	5,171.0	4,918.0	4,577.0
Passenger car sales (thousands)	June	881	882	1,086	June	21.7	21.6	27.6
Year to date (thousands)	June	4,723	3,842	6,198	June	120.5	98.7	163.7

*Current indicators are preliminary and subject to revision.

†Indiana unemployment rates are derived by dividing the number of employed workers by the *labor force*; the figures are not seasonally adjusted. Previous figures were based on *work force* figures and were seasonally adjusted. All three figures shown in this issue reflect this change by the Indiana Employment Security Division and are consistent with the U.S. Bureau of Labor Statistics.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Subscriptions to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

UNITED STATES BUSINESS INDICATORS

Quarterly Data

Seasonally Adjusted Annual Rates (\$ billion) Percentage Change at Annual Rates

	1974 2d Qtr.	1974 1st Qtr.	1973 2d Qtr.	1974 2d Qtr.	1974 1st Qtr.	1973 2d Qtr.
Gross national product (GNP)	1,383.5	1,358.8	1,277.9	7.5	4.5	9.6
GNP (\$1958)	828.0	830.5	837.4	-1.2	-7.0	2.2
GNP potential level (\$1958)*	872.6	864.1	839.1	4.0	4.0	0.5
Government purchases	303.5	296.3	273.3	10.1	14.6	6.5
Personal consumption expenditures	866.8	840.6	799.0	13.1	8.4	9.2
Private domestic investment	213.0	210.5	205.1	4.8	-22.7	12.8
Corporate profits before tax*	138.7	122.7	120.4	63.3	0.0	53.3
Business inventories*	227.5	217.8	198.0	19.2	14.5	12.5
Federal surplus-deficit (NIA)*	-1.5	-2.3	-11.2	-	-	-

Monthly Data

Current Levels or Annual Rates

Percentage Change at Annual Rates

	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index†	July 148.0	146.9	132.5	July 9.5	12.2	2.0
Consumer price index—food†	July 159.4	160.0	139.9	July -4.4	3.8	3.5
Wholesale price index†	July 160.9	155.1	133.6	July 55.0	5.8	-15.4
Money supply (\$ billions)	July 280.0	279.6	266.4	July 1.7	8.1	4.1
Money supply including time deposits	July 598.9	596.2	552.1	July 5.6	11.1	5.8
Mobile home shipments (thousands)	June 441.0	451.0	600.0	June -23.6	54.3	-42.2
Mortgages—outstanding (\$ billions)‡	June 243.8	241.6	222.6	June 11.4	14.0	19.6
Mortgages—new issues (\$ billions)‡	June 51.1	59.0	68.8	-	-	-
Mortgage rate—new homes	July 9.0	8.9	7.9	-	-	-
Prime rate on business loans	July 12.0	11.5	8.3	-	-	-

*Data are for the preceding quarters.

†Base period, 1967 = 100.

‡All savings and loan associations.

MAN-HOURS IN INDUSTRIAL PRODUCTION

Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	July 1974	June 1974	July 1973	INDIANA	July 1974	June 1974	July 1973
Manufacturing	100.7	101.7	120.0	Manufacturing	104.3	102.7	105.1
Food	95.0	95.5	94.9	Food	87.4	89.7	91.3
Apparel and textiles	96.5	95.5	100.2	Apparel and textiles	100.7	97.6	90.6
Lumber and wood	105.6	106.1	105.9	Lumber and wood	104.0	102.4	124.9
Furniture	109.4	111.5	113.2	Furniture	119.3	115.0	112.6
Paper	106.0	105.5	105.5	Paper	102.8	97.5	95.9
Printing	104.0	104.2	103.3	Printing	95.8	100.3	92.0
Chemicals	106.4	106.2	104.6	Chemicals	113.0	110.3	108.5
Petroleum and coal	104.0	105.5	101.4	Petroleum and coal	89.8	88.2	82.6
Rubber	132.7	131.1	131.8	Rubber	121.1	115.8	121.5
Stone, clay, and glass	109.4	109.7	112.2	Stone, clay, and glass	93.2	96.2	94.0
Primary metals	101.3	101.6	101.9	Primary metals	103.7	101.8	102.7
Fabricated metals	103.7	105.1	106.6	Fabricated metals	119.0	115.3	113.5
Nonelectrical machinery	108.5	109.4	102.7	Nonelectrical machinery	110.9	115.1	108.1
Electrical machinery	103.4	103.4	102.7	Electrical machinery	103.5	96.6	112.0
Transport equipment	91.5	87.6	98.4	Transport equipment	106.7	105.5	110.5

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	June 1974	May 1974	June 1973	REPORTING CITIES	June 1974	May 1974	June 1973
ANDERSON				GARY			
BD*	139.6	161.6	159.0	BD	222.2	220.5	184.9
CUC†	304.0	376.4	300.1	CUC	208.3	277.7	356.6
IES‡	131.4	139.5	143.0	IES	168.7	161.4	168.6
BEDFORD				GOSHEN			
CUC	156.9	171.1	354.5	BD	200.2	215.5	181.7
IES	113.6	110.4	128.0	IES	174.6	160.5	163.1
BLoomington				HAMMOND §			
BD	384.7	233.6	186.8	IES	143.3	150.9	138.5
CUC	272.8	205.1	448.2	HUNTINGTON			
IES	99.1	104.2	113.1	CUC	154.1	171.4	530.1
COLUMBUS				IES	134.1	133.7	135.2
BD	73.0	67.4	191.6	INDIANAPOLIS			
CUC	63.4	59.0	139.7	BD	383.5	434.6	279.3
IES	157.6	158.4	152.3	CUC	236.7	243.8	412.2
CONNERSVILLE				IES	147.2	141.1	146.3
BD	182.9	185.1	150.8	JEFFERSONVILLE			
CUC	200.4	301.7	257.3	BD	234.8	252.2	248.9
IES	150.0	152.3	148.8	IES	154.6	141.1	140.1
CRAWFORDSVILLE				KOKOMO			
BD	N.A.	240.9	195.6	BD	173.4	195.9	157.0
CUC	323.1	243.9	968.4	CUC	535.2	606.6	131.4
IES	151.9	161.7	150.7	IES	183.2	185.6	192.6
EAST CHICAGO §				LAFAYETTE			
BD	168.2	213.2	345.4	BD	192.2	218.7	251.1
CUC	134.0	131.9	300.0	CUC	329.6	416.7	721.2
IES	107.9	110.0	122.3	IES	168.6	167.5	167.5
ELKHART				LA PORTE			
BD	214.7	226.1	253.4	CUC	192.3	170.9	331.3
CUC	379.5	414.5	391.5	IES	167.4	158.7	157.0
IES	156.6	148.8	142.0	LOGANSPOrt			
EVANSVILLE				BD	469.0	280.7	217.4
BD	195.7	199.0	152.0	CUC	184.7	202.1	137.7
CUC	142.4	152.1	325.8	IES	189.8	203.7	184.0
IES	106.8	104.6	118.7	MADISON			
PORT WAYNE				BD	201.0	229.4	167.5
BD	255.6	260.7	197.3	CUC	209.3	154.2	246.4
CUC	182.0	190.7	317.6	IES	121.1	134.7	139.0
IES	121.3	111.4	128.5	MARION			
RANKFORT				BD	157.8	207.0	166.9
CUC	215.0	270.6	383.8	CUC	436.2	333.9	260.7
IES	170.6	159.6	168.6	IES	121.1	118.6	135.5

BD=Bank Debits
CUC=Continued Unemployment Claims
IES=Industrial Electricity Sales

§Continued Unemployment Claims of
East Chicago and Hammond are combined.

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	June 1974	May 1974	June 1973	REPORTING CITIES	June 1974	June 1974	May 1974
MICHIGAN CITY				SEYMOUR			
BD*	202.3	216.8	193.0	BD	310.1	336.2	244.9
CUC†	200.7	161.3	381.4	CUC	80.5	61.4	149.4
IES‡	169.7	181.6	192.6	IES	121.0	117.9	125.0
MISHAWAKA				SOUTH BEND			
BD	120.8	129.1	215.2	BD	148.7	195.3	174.4
IES	N.A.	101.3	101.3	CUC	176.5	200.6	293.7
MUNCIE				IES	104.1	95.5	104.3
BD	179.0	177.3	172.3	TERRE HAUTE			
CUC	119.0	118.4	257.4	BD	237.1	237.9	161.2
IES	112.9	116.4	110.1	CUC	153.3	150.2	415.0
NEW ALBANY				IES	176.5	165.8	157.4
BD	363.3	430.6	359.1	VALPARAISO			
CUC	281.9	275.9	670.5	CUC	296.6	278.8	648.2
IES	104.7	101.3	95.0	IES	N.A.	N.A.	164.5
NEW CASTLE				VINCENNES			
BD	224.6	242.1	181.8	BD	206.2	217.4	168.4
CUC	198.6	212.8	237.4	CUC	142.2	145.8	392.3
IES	143.9	161.4	155.5	IES	147.1	173.6	164.7
PERU				WABASH			
BD	211.2	N.A.	200.8	BD	191.4	188.8	170.8
CUC	93.5	89.4	133.6	CUC	93.5	134.9	121.0
IES	158.6	166.2	158.6	IES	141.2	140.8	159.7
RICHMOND							
BD	151.0	171.2	147.7				
CUC	189.7	185.6	465.7				
IES	102.2	115.0	171.8				

*BD=Bank Debits

†CUC=Continued Unemployment Claims

‡IES=Industrial Electricity Sales

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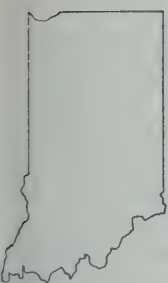
XLIX

OCTOBER 1974

Indiana Business Review

Spendable Average Weekly Earnings— New Data for Indiana Counties <i>William J. White</i>	1
Dimensions of Economic Inequality Between Blacks and Whites <i>Wayne Bartholomew</i>	8
Small Business and Entrepreneurship <i>Joseph M. Waldman</i>	11
Indiana's Image Overseas <i>Jaap Kamp</i>	13

Division of Research/School of Business/Indiana University



Indiana Business Review

VOL. XLIX

OCTOBER 1974

Spendable Average Weekly Earnings— New Data for Indiana Counties

WILLIAM J. WHITE

State Analyst

Division of Research, School of Business, Indiana University

Rising prices and a changing economic environment have increased interest in the amount of spendable earnings generated in each county for current consumption, savings, and debt repayment. With the cooperation of the Indiana Employment Security Division (IESD), the Division of Research, School of Business, Indiana University has developed county estimates of spendable average weekly earnings. Spendable earnings are derived by subtracting estimates of federal income and social security taxes from average weekly earnings.

Each quarter, IESD reports total employment and average weekly earnings in all covered employment and in manufacturing industries by county.¹ The Division of Research, using formulas developed by the U.S. Bureau of Labor Statistics, deducts estimated withholdings from earnings for two major federal taxes—income and social security—to give spendable earnings. These formulas (see Table 1) were developed for workers with no depen-

dents and for workers with three dependents; the Division chose to use the latter since it is the more representative.

Thus our estimates of spendable average weekly earnings by county are for workers with three dependents and for all covered employees and manufacturing employees separately. Data for the second quarter of 1973 are shown in Table 2. The Division plans to publish these

1. Average weekly earnings are computed from the quarterly earnings and average employment of all employees in establishments covered by the Indiana Employment Security Act. The figures are computed from total payrolls; therefore, they include all employees—janitors, company officers, factory workers, and office employees—instead of only production workers.

Covered employment includes employees of all firms subject to the Indiana Employment Security Act. In general, the act includes employers with one or more employees. Excluded are railroads, households, most farms, small nonprofit institutions, churches, and government establishments with certain exceptions. State hospitals, schools for higher education, and local government utilities are covered.

data quarterly in the *Data Supplement*.² The data will probably not be available until about nine months after the close of a particular quarter.

THE METHOD

Since the current series is derived by deducting only federal income and social security taxes, the opportunity exists for making the series a more accurate measure of spendable earnings by deducting state taxes withheld. The Division of Research is investigating the practicality of deducting the Indiana income tax and the local option tax to derive a better estimate of take-home pay by county. Other withheld money, such as group life and health insurance premiums and retirement fund payments, vary from one employer to the next; therefore, no practical method exists for deducting these items from gross earnings.

The spendable earnings figures are an approximation of *nominal* rather than *real* take-home pay. No price indexes are available for individual counties, and available indexes are not really appropriate for deflating nominal

2. The *Data Supplement*, a review of current national, state, and local economic indicators, is mailed monthly to interested subscribers to the *Indiana Business Review*.

earnings by county. The estimates of spendable earnings do not necessarily reflect differences in real income or level of living among counties.

Spendable earnings could be deflated by using the national Consumer Price Index (CPI) or the Implicit Deflator for Personal Consumption Expenditures (PCE) to estimate changes in real spendable earnings over time for each county. The CPI is an index for goods and services purchased by urban wage and clerical workers, and the PCE index covers all purchases of consumers, rural and urban. It is thus more representative than the CPI, although neither index would reflect purchasing patterns of consumers in rural areas. Nevertheless, both indexes may reasonably reflect changes in prices paid by residents of Indiana counties both rural and urban. Deflating spendable earnings with either index might thus result in reliable measures of the trend in purchasing power over time for each county.

Such a deflated earnings series would not, however, be a reliable indicator of differences in real incomes or levels of living among counties. None of the available price indexes adequately measures difference in costs of living among counties in Indiana. Rural areas typically require less expenditure to maintain a given level of living than do urban areas, yet no index tells us how great this difference is among or between specific counties. All we can do

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TABLE 1

Spendable Earnings Formulas for 1973 Estimates*

Worker with No Dependents		Worker with Three Dependents	
Gross Average Weekly Earnings (1)	Formula (X=Gross Average Weekly Earnings) (2)	Gross Average Weekly Earnings (3)	Formula (X=Gross Average Weekly Earnings) (4)
\$ 0-39.42	.9415X	\$ 0-82.69	.9415X
39.43-49.04	.8015X + \$ 5.52	82.70-101.92	.8015X + \$11.58
49.05-58.65	.7915X + 6.01	101.93-121.15	.7915X + 12.60
58.66-68.27	.7815X + 6.59	121.16-140.38	.7815X + 13.80
68.28-77.88	.7715X + 7.28	140.39-159.62	.7715X + 15.21
77.89-116.35	.7515X + 8.84	159.63-166.67	.7515X + 18.41
116.36-154.81	.7315X + 11.16	166.68-207.69	.7800X + 13.66
154.82-166.67	.7015X + 15.80	207.70 - 248.87	.8385X + 1.51
166.68-197.96	.7375X + 9.80	248.88 - 256.40	.813X + 7.85
197.97-207.69	.7290X + 11.49	256.41 - 326.92	.7800X + 16.31
207.70-243.21	.7875X + 0.66		
243.22-256.40	.7705X + 3.48		
256.41-283.65	.7300X + 13.86		

*Spendable earnings for a given level of gross average weekly earnings (columns 1 and 3) equals a multiple of those earnings as shown in columns 2 and 4.

The above formulas are to be used for the period January 1973 through December 1973 reflecting the changes in social security taxes effective January 1973.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C. Memorandum to Regional Directors, December 29, 1972.

issue a warning: differences in nominal earnings are not precise indicators of differences in real incomes.

Nominal earnings may vary among counties because of differences in the mix of economic activities. Some counties may have higher proportions of high-wage activities than others; conversely, some counties may have a greater than average share of low-paying activities. Before saying that one county has high (or low) earnings relative to another, one should take account of the mix of activities. Because of wage differences among industries, one should really look at earnings across counties for a given industry in reaching conclusions about relative earnings.

Table 3 is the result of applying the spendable earnings formulas of Table 1 to statewide average weekly earnings for selected

industries. These data are also available quarterly.

The spendable average weekly earnings series by county and industry (Tables 2 and 3) differ from the national series computed by the Bureau of Labor Statistics. Our tables are based on payroll data for *all* employees of firms subject to the Indiana Employment Security Act. The Bureau of Labor Statistics bases its series on employment and payroll data for production employees only in specific types of employment.

USES FOR NEW DATA

The spendable earnings series should be useful in studies of markets, in wage negotiations, and in measurement of the impact of changes in

TABLE 2

Covered Employment and Payrolls by County, April-June 1973

		<i>Average Weekly Earnings</i>		<i>Spendable Average Weekly Earnings</i>	
		<i>All Covered Employment</i>	<i>Manu- facturing</i>	<i>All Covered Employment</i>	<i>Manu- facturing</i>
Adams	8,621	\$144.69	\$166.29	\$126.83	\$143.37
Allen	118,380	171.46	221.60	147.39	187.32
Bartholomew	26,113	184.62	215.72	157.66	182.39
Benton	1,790	124.46	110.49	111.06	100.05
Blackford	4,104	141.79	163.55	124.60	141.31
Boone	5,379	126.69	159.16	112.80	138.00
Brown	686	78.00	158.86	73.43	137.77
Cafroll	2,933	125.08	138.11	111.55	121.73
Cass	12,320	141.08	160.33	124.05	138.89
Clark	21,485	142.00	175.27	124.77	150.37
Clay	3,272	117.15	124.83	105.32	111.35
Clinton	7,758	125.54	142.71	111.90	125.32
Crawford	535	100.38	91.81	92.03	85.16
Davies	4,870	121.92	157.62	109.08	136.81
Dearborn	7,633	162.62	193.68	140.61	164.73
Decatur	4,712	136.77	160.86	120.68	139.29
Dekalb	4,071	148.00	177.07	129.39	151.77
Delaware	40,167	166.69	215.48	143.67	182.19
Dubois	11,947	140.08	158.84	123.27	137.75
Elkhart	68,737	173.81	196.27	149.23	166.75
Fayette	12,028	154.08	171.09	134.08	147.11
Floyd	11,248	132.23	144.10	117.13	126.38
Fountain	4,241	124.77	143.42	111.30	125.85
Franklin	1,705	113.15	131.19	102.15	116.32
Fulton	4,561	136.15	149.29	120.20	130.38
Gibson	6,610	142.23	180.63	124.95	154.55
Grant	29,368	174.23	211.16	149.55	178.56
Greene	3,984	114.00	127.89	102.83	113.74
Hamilton	10,382	144.62	173.06	126.78	148.64
Hancock	5,398	140.85	184.99	123.87	157.95
Harrison	3,083	116.62	131.40	104.90	116.48
Hendricks	6,088	131.85	151.74	116.84	132.27
Henry	11,461	192.62	273.32	163.90	229.49
Howard	38,802	201.62	243.19	170.92	205.42
Huntington	10,199	127.23	142.66	113.23	125.28
Jackson	8,983	127.54	139.84	113.47	123.08
Jasper	4,325	133.31	137.26	117.98	121.06
Jay	6,584	148.38	170.68	129.68	146.79
Jefferson	7,978	138.62	154.92	122.13	134.73
Jennings	3,457	121.08	139.36	108.43	122.70
Johnson	10,856	129.38	164.87	114.91	142.30
Knox	9,475	127.38	173.23	113.34	148.77
Kosciusko	16,550	144.85	172.15	126.96	147.93
Lagrange	5,889	148.64	165.75	129.88	142.97
Lake	177,754	194.00	232.35	164.98	196.33
LaPorte	33,765	153.46	178.10	133.60	152.57
Lawrence	8,534	154.62	190.35	134.49	162.13

TABLE 2, *Continued*

	<i>Employment</i>	<i>Average Weekly Earnings</i>		<i>Spendable Average Weekly Earnings</i>	
		<i>All Covered Employment</i>	<i>Manu- facturing</i>	<i>All Covered Employment</i>	<i>Manu- facturing</i>
Madison	46,679	\$190.38	\$239.08	\$162.15	\$201.97
Marion	330,668	175.77	221.68	150.76	187.38
Marshall	9,560	136.15	158.83	120.20	137.74
Martin	1,523	115.62	128.67	104.11	114.35
Miami	6,545	120.62	136.35	100.07	120.35
Monroe	31,924	143.62	154.28	126.01	134.23
Montgomery	9,103	163.00	211.27	140.90	178.65
Morgan	4,685	116.15	144.08	104.53	126.36
Newton	2,737	100.08	112.84	91.79	101.91
Noble	8,915	136.85	155.97	120.74	135.54
Ohio	317	90.69	93.59	84.26	86.59
Orange	3,611	112.62	123.96	101.73	110.67
Owen	981	101.31	141.23	92.78	124.17
Parke	1,683	103.85	117.59	94.79	105.67
Perry	5,011	135.38	147.32	119.59	128.86
Pike	1,768	193.62	119.12	164.68	106.88
Porter	24,485	184.15	239.17	157.29	202.05
Posey	4,551	165.62	224.48	142.87	189.73
Pulaski	1,869	126.23	142.62	112.44	125.25
Putnam	5,318	139.77	178.58	123.03	152.95
Randolph	8,476	154.62	173.22	134.49	148.77
Ripley	4,986	158.69	205.59	137.63	174.02
Rush	3,042	131.38	172.51	116.47	148.21
Saint Joseph	2,947	126.08	151.40	112.33	132.01
Scott	8,571	135.31	156.51	119.54	135.95
Shelby	2,048	108.31	135.50	98.32	119.69
Spencer	2,668	117.54	149.17	105.63	130.29
Starke	5,311	129.46	173.58	114.97	149.05
Steuben	81,023	161.38	197.90	139.68	168.02
Sullivan	2,859	142.38	124.42	125.07	111.03
Switzerland	882	101.69	104.72	93.08	95.48
Tippecanoe	38,749	156.38	196.78	135.85	167.14
Tipton	2,501	143.62	174.70	126.01	149.92
Union	655	122.92	150.92	109.86	131.64
Vanderburgh	69,547	149.77	178.17	130.75	152.63
Vermillion	3,064	165.23	197.14	142.58	167.42
Vigo	38,350	149.15	172.21	130.27	147.98
Wabash	11,472	140.38	159.93	123.50	138.59
Warren	1,049	145.15	-0.00	127.19	0.00
Warrick	7,478	211.15	250.20	178.55	211.26
Washington	3,995	108.77	112.90	97.90	101.96
Wayne	28,091	158.69	197.28	136.86	167.53
Wells	5,976	145.00	177.59	127.07	152.18
White	5,385	121.62	140.00	108.07	123.21
Whitley	6,005	142.77	163.13	124.59	141.00
Not Classified	43,917	193.69	229.73	163.95	194.13

TABLE 3

Indiana Spendable Earnings by Industry (second quarter, 1973)

<i>Industry</i>	<i>Average Weekly Earnings</i>	<i>Spendable Average Weekly Earnings</i>
Mining	\$232.76	\$196.68
Construction	210.51	178.02
Manufacturing	200.80	170.28
Durable goods	206.92	175.06
Lumber and wood products	143.12	125.63
Furniture	154.69	134.55
Stone, clay, and glass	184.27	157.39
Primary metals	232.74	196.66
Steel mills	242.20	204.59
Fabricated metals	190.93	162.59
Structural metal products	185.26	158.16
Nonelectrical machinery	204.90	173.48
General industrial machinery	206.51	174.74
Electrical machinery	189.54	161.50
Radios, TVs, phones, and electronic components	183.06	156.45
Equipment for autos, aircraft, and railroads	203.84	172.66
Transportation equipment	244.22	206.29
Autos and parts	259.02	218.35
Aircraft and parts	260.58	219.56
Instruments	169.48	145.85
All other durable goods	181.51	155.24
Nondurable goods	179.47	153.65
Food	177.06	151.77
Canning and preserving	151.48	132.08
Apparel and textiles	110.01	99.67
Paper	182.32	155.87
Printing	174.28	149.60
Newspapers	164.72	142.20
Commercial printing	177.11	151.81
Chemicals	235.07	198.62
Drugs and medicines	253.35	213.82
Petroleum and coal products	255.62	215.67
Rubber and plastics products	161.77	139.98
All other nondurable goods	101.81	93.18
Transportation except railroads, taxis, and airlines	216.16	182.76
Communications	184.54	157.60
Utilities	207.86	175.80
Trade	115.41	103.95
Wholesale	189.49	161.46
Retail	96.72	89.10
Finance, insurance, and real estate	148.95	130.12
Services except hospitals, schools, and nonprofit organizations	102.91	94.05

federal payroll tax rates.³ For example, spendable earnings (Table 2) might be used by employers and labor representatives in a given county to determine the spendable earnings of their workers relative to the county average.

Alternatively, industry comparisons can be made with the results shown in Table 2. Together, Tables 1 and 3 can be used in wage studies and wage negotiations.

When viewed over time, trends in the

various counties can be traced and compared. The shifting relative positions of counties may indicate a changing industrial mix and changing employment opportunities. Relative increases in spendable earnings would indicate new or expanded activity by firms in high-paying industries or industries employing a large portion of the labor force. Quarterly changes in county spendable earnings could reflect strikes, shutdowns for vacations, maintenance, large-scale layoffs or rehiring, major pay increases, or the cyclical nature of the industry involved.

Changing employment opportunities in retail trade would be expected to have a minor influence on spendable earnings. The number of established firms is large relative to the number of exits or entries, and any one retailer generally accounts for a small percentage of all retail employees.

Another important use of spendable earnings information is research. For example, personal income data by county are available only on an annual basis, but spendable earnings by county is a quarterly series which can be used as a proxy for personal income and similar series. It affords more detail, it is available more frequently, and it is available more promptly than personal income.

A LOOK AT SPECIFIC COUNTIES

Let us examine some of the results for the second quarter of 1973 to show possible reasons for the relative positions of Brown, Crawford, Henry, and Warrick Counties (Table 3). Table 3 will be helpful since it gives a statewide view of the relative earnings levels of different industries.

People working in *manufacturing* firms in Henry County enjoyed the highest spendable average weekly earnings (\$229.50). People

working in Warrick County (*all* covered employment) received the greatest spendable weekly earnings (\$178.56) because 53.5 percent of the covered employment in Warrick is in manufacturing. An additional 19.9 percent of covered employees (1,356 people) are working in mining, construction, transportation, communications, and public utilities, which are all characterized by relatively high average weekly earnings statewide (see Table 3). Henry County employment in these high-paying non-manufacturing industries was only 0.7 percent. This figure and the 19.9 percent figure for Warrick County explain how Henry County can have the highest spendable earnings in manufacturing and how Warrick County can have the highest spendable earnings for all covered employment.

Crawford County's manufacturing employees—only 132 persons—received the lowest spendable average weekly earnings (\$85.17).⁴ Brown County's small covered employment includes only 17.9 percent in relatively high-earning categories and explains its last place in spendable earnings for all covered employment (\$73.44). The 132 people employed in relatively high-paying industries in Crawford County represent 26.2 percent of covered employment; thus, although their spendable earnings are small, they are still greater than the earnings of the average worker in Brown County. This accounts for their relative positions *vis-a-vis* spendable earnings in manufacturing employment and spendable earnings for all covered employment.

To a large extent, the size of establishment and type of product are interdependent. However, the type of product, its characteristics, and market probably explain why Crawford County's average weekly spendable earnings in manufacturing are \$52.60 less than the \$137.77 reported for Brown County.

3. The new data series should prove valuable to business, government, and academic groups. The Division of Research will welcome suggested improvements or modifications and applications of the data.

4. Average weekly earnings for manufacturing in Warren County are not published to avoid disclosure of data for individual firms.

Dimensions of Economic Inequality Between Blacks and Whites

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The purpose of this article is to analyze the extent of and changes in economic inequality between blacks and whites in Indiana. In order to determine whether the degree of economic inequality differs among various metropolitan areas within Indiana, four standard metropolitan statistical areas (SMSAs) in the state were included in this study. The four SMSAs are South Bend, Fort Wayne, Gary-Hammond-East Chicago, and Indianapolis.

South Bend and Fort Wayne are fairly small SMSAs, and the proportions of their populations which are black are relatively small. The Indianapolis and Gary-Hammond-East Chicago SMSAs were chosen to represent large SMSAs (they are large in comparison to the size of other SMSAs in Indiana) with a relatively large proportion of their population being black. For purposes of comparison, data were also collected for the entire state of Indiana and for the United States. The data were compiled from the 1960 census and the 1970 census.

MEDIAN FAMILY INCOMES

One of the most important measures of the equality between blacks and whites is the median family income. This measure is biased

because black families tend to have a larger number of income earners than their white counterparts. Thus, while a comparison of median family income by race does not provide an unbiased estimate of the earning power of black and white individuals, it does provide a measure of the comparative ability of black and white families to command goods and services. However, a comparison of the median family income for blacks and whites overstates the welfare of the black family relative to the white family. On the average, black families are larger than white families; therefore, the family income must support a larger number of people.

The method used to compare black and white median family incomes is to calculate black median family income as a percent of white median family income. A problem occurred at this point in that census data for SMSAs for 1959 give median incomes of black families for all families but not median incomes for white families. In order to estimate median income for white families for the four SMSAs for 1959 it was assumed that the 1959 relationship between median incomes for white families and median incomes for all families was the same as that prevailing in 1969. Thus, median income for white families as a percentage of median

incomes for all families for 1969 were multiplied by the census data for median incomes for all families in 1959 to arrive at estimates of median incomes for white families in 1959.

Since the median income of white families in 1969 was only 2.4 percent higher than the median income of all families, any possible error introduced by this estimation technique would not be large. Additional evidence that any error is likely to be small is that white family income as a percent of total family income for the State of Indiana remained virtually constant between 1959 and 1969, changing from 101.3 percent in 1959 to 101.4 percent in 1969. Table 1 shows the comparisons of median incomes for black and white families.

Table 1 indicates that the four SMSAs and the State of Indiana had a higher degree of economic equality (as measured by median incomes) than the nation. However, even in the case of the State of Indiana, which had the greatest equality, the median income of black families was only 78.6 percent of the median income for white families in 1969. The Gary-Hammond-East Chicago SMSA had the greatest equality (that is, the median incomes of black families were closer, in percentage terms, to their white counterparts) while South Bend was the SMSA with the greatest inequality. The latter also had the smallest improvement in the median income for blacks between 1959 and 1969. The United States showed the greatest improvement, and within the state Indianapolis had the greatest improvement. Data are not available for the SMSAs for the years after 1969, but Bureau of the Census data for the United States indicate that there has been some erosion of the gains made between 1959 and 1969.

One may argue that a better measure of the relative income differences between blacks and whites than median family income percentages is the absolute dollar difference between the median family incomes of blacks and whites.

This argument assumes that the absolute dollar difference is more important because it represents the actual purchasing power discrepancy between the two races. These differences are shown in Table 2.

TABLE 1
Median Income for Black Families as a Percent of the Median Income for White Families

	1959	1969	Percentage Change, 1959-69
South Bend	66.1%	69.9%	+3.8
Fort Wayne	67.5	73.7	+6.2
Gary-Hammond-East Chicago	69.2	74.6	+5.4
Indianapolis	64.5	71.1	+6.6
State of Indiana	74.2	78.6	+4.4
United States	53.6	63.3	+9.7

TABLE 2
The Absolute Dollar Difference Between Median Family Incomes Earned by Black and White Families*

	1959	1969	Change, 1959-69 (in \$)
South Bend	\$2,276	\$3,140	+864
Fort Wayne	2,164	2,932	+768
Gary-Hammond-East Chicago	2,092	2,897	+805
Indianapolis	2,411	3,201	+790
State of Indiana	1,516	2,164	+648
United States	2,732	3,653	+921

*In order to obtain a measure of the difference in the purchasing power of incomes earned by black and white families, the absolute dollar differences in the above table were deflated by the Consumer Price Index. The results indicate that in all six areas the purchasing power of white families increased faster than the purchasing power of black families. The average increase in the gap between median black family income and median white family income, in constant dollars, was \$182 between 1959 and 1969. Thus, not only did the absolute dollar gap between black and white families increase between 1959 and 1969 when measured in current dollars, it also increased when measured in constant dollars.

When the absolute dollar difference between median family incomes for blacks and whites is used as the criterion, Indiana shows the least inequality and the nation shows the greatest inequality. However, in the state of Indiana, the median income of black families was almost \$2,200 below the median income of white families in 1969. The national gap was more than \$3,600. The Indianapolis SMSA showed the greatest inequality in terms of the absolute dollar difference between black and white family median incomes; the Gary-Hammond-East Chicago SMSA had the least inequality. *The most important point in Table 2 may be that the gap between the incomes earned by black families and incomes earned by white families increased substantially between 1959 and 1969 for all four SMSAs, the State of Indiana, and the United States.* Thus, if economic inequality is measured in terms of the absolute dollar difference between incomes earned by black families and white families, economic inequality actually increased during the 1960s.

UNEMPLOYMENT RATES, 1960 AND 1970

A comparative analysis of the unemployment rates of black and white workers provides another means of measuring economic inequality. By definition, unemployment exists only when workers are without work and are actually looking for work. Therefore, if the unemployment rate for black workers differs significantly from the unemployment rate for white workers, regardless of the income levels of the two groups, economic inequality exists. Table 3 presents a comparison of unemployment rates by race.

In the four SMSA's and Indiana, the unemployment situation for blacks vis-a-vis whites was worse than that of the nation's. Except for the national average, the unemployment rate for black workers was more than twice as high

TABLE 3

Ratio of Black Unemployment Rates to White Unemployment Rates

	1960	1970	Percentage Change, 1960-70
South Bend	2.56	2.40	-6.2
Fort Wayne	3.77	2.18	-42.2
Gary-Hammond-East Chicago	2.28	2.18	-4.6
Indianapolis	2.66	2.56	-3.8
State of Indiana	2.00	2.13	+6.5
United States	1.55	1.70	+9.7

as it was for white workers. The Indianapolis SMSA had the greatest inequality in 1970. The four SMSAs showed improvement between 1960 and 1970, but the state and the United States actually showed greater inequality in 1970 than in 1960. The improvement in the Fort Wayne SMSA was impressive, whereas the improvement in the other three SMSAs was small possibly because the economy was in different stages of the business cycle in 1960 and 1970. For example, the national unemployment rate was 5.5 percent in 1960 but was 4.1 percent in 1970.

The dimensions of economic inequality presented in this article are three of many that could be discussed. In research carried out by the author, other dimensions of economic inequality have been considered. In all cases blacks had significantly fewer advantages than their white counterparts. In some cases, the four SMSAs and the state had less economic inequality between blacks and whites than the nation as a whole. In other cases, the opposite was true.

EDITORS NOTE: *IBR* readers interested in exploring additional dimensions of economic inequality between blacks and whites may obtain a much more comprehensive analysis of the subject by writing to Dr. Wayne Bartholomew, Business and Economic Riverside Hall, Indiana University at South Bend, South Bend, Indiana 46615.

Small Business and Entrepreneurship

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The contribution of small business to the U.S. economy is often overlooked because of the inordinate visibility given to large business concerns in the literature of business administration, the news media, and popular periodicals. In terms of the number of business units, employment, and contribution to private gross national product, small business is quite consequential—how consequential, of course, depends on one's definition of small business.

Over the years, individuals and groups have defined small business in both qualitative and quantitative terms. Among the quantitative measures offered have been employment and volume of sales. These quantitative measures often vary when comparing, for example, manufacturing, wholesaling, and retailing firms. While \$5 million or less in annual sales may be considered small business in the wholesaling industry, the cutoff in retailing and service industries might be at \$1 million or less in annual sales. When employment is used as the measure, 250 employees or less might be considered small business in manufacturing, but big business in the retailing and service industries.

In qualitative terms, a small business is usually characterized as one which has indepen-

dent management, is owned by the manager or a small group, has a local area of operation but not necessarily a local market, and is not dominant in its field of operations. The legal form of the enterprise is not relevant to a definition of small business; it may assume any of the more common types such as sole proprietorship, general partnership, limited partnership, or corporation.

REPORTING UNITS

An indirect indication of the number of small businesses in Indiana may be gleaned from the U.S. Department of Commerce publication, *County Business Patterns*. In the accompanying table, Indiana businesses are listed according to type of industry and number of employees.

"Reporting units" shown in the table are not necessarily identical to separate legal entities (sole proprietorship, partnerships, corporations, and so on). For manufacturing industries, each location of the company in the state is considered a separate reporting unit. In the case of nonmanufacturing industries, companies (legal entities) with multiple locations in an industry are counted once in each county. If

Major Industrial Groups and Number of Employees in Indiana, 1972

Major Industry Group	Number of Reporting Units by Number of Employees							
	1-3	4-7	8-19	20-49	50-99	100-249	250-499	500-Mo
Agricultural services, forestry, fisheries	332	146	81	14	5	—	—	—
Mining	142	80	90	46	10	4	5	—
Contract construction	3,693	1,735	1,252	508	134	76	13	4
Manufacturing	1,289	886	1,416	1,210	684	619	289	223
Transportation, other public utilities	1,114	500	644	417	158	84	35	17
Wholesale trade	2,192	1,572	1,719	821	200	77	9	5
Retail trade	11,123	6,731	5,551	2,334	513	210	54	26
Finance, insurance, real estate	4,080	1,301	960	483	132	85	20	11
Services	13,117	4,733	2,972	1,065	345	168	31	39
Unclassified establishments	1,361	441	310	64	—	—	—	—
<i>Total</i>	<i>38,443</i> (46%)	<i>18,125</i> (22%)	<i>14,995</i> (18%)	<i>6,962</i> (8%)	<i>2,181</i> (3%)	<i>1,323</i> (2%)	<i>456</i> (1%)	<i>325</i>

SOURCE: U.S. Bureau of the Census, *County Business Patterns*, 1972 Indiana CBP-72-16 (Washington: U.S. Government Printing Office, 1973), pp. 12-22, Table 1B.

nonmanufacturing companies operate in other counties and other industries, additional reporting units are enumerated for them. Therefore, the data set forth the size of the reporting units by number of employees and not necessarily the extent of the total employment of the legal entities, unless the latter operate in only one location and industry. In addition, the data exclude government employees, self-employed individuals, farm workers, domestic service workers, and railroad employment subject to the Railroad Retirement Act.

Even with the above exclusions and reporting unit qualifications, it is apparent that a preponderance of small operations exists in Indiana. For example, some 94 percent of the reporting units have under fifty employees for this period. As one would suspect, the retail trade and service industries have a substantial number of small employment reporting units. The addition of self-employed persons to these data would only underscore these findings.

THE UNIVERSITY ROLE

The Indiana University School of Business aware of the role of the entrepreneur and small businessman in Indiana and the interest shown by students in creating and entering small businesses, has recently developed two programs—one in entrepreneurship and the other in small business—within its management and administration curriculum. Students who choose these programs will be exposed to the problems of starting up, operating, and developing enterprises.

For example, a course entitled "Small Business Entrepreneurship" will be offered for the first time in the spring of 1975. The objectives of the course will be to develop in the student a refined understanding of his own personal goals and their relationship to an entrepreneurial career; to improve and refine the student's knowledge of the various aspects of starting an enterprise; and to assist the student in developing an entrepreneurial project that he or she

may pursue upon graduation or after some years of experience in a similar enterprise. Another course entitled "Venture Growth Management" will focus on the problems of a growth-oriented business as exemplified by such questions as why and how to "go public" and how to tap venture capital and other financing.

In the small business program, courses are being developed which will provide students

"real world" experiences in working in small business and viewing operating problems at first hand. The mission of the school, therefore, extends beyond equipping students with the necessary knowledge, skills, and techniques to enter large enterprises and to perform effectively in managerial and staff functions. The contribution of the small businessman and entrepreneur to Indiana is too great to be ignored.

Indiana's Image Overseas

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As a Dutch citizen living in Indiana since August 1972, I have become intrigued by the nonexistence of Indiana's image, visibility, or identity overseas. First, before my departure from Holland I realized that Indiana was relatively unknown to colleagues and friends; we did not easily visualize the state on the map; Indiana was neither on the East Coast nor on the West Coast. The best point of reference proved to be "immediately south of Chicago." Furthermore, I noticed that the state had few specific reputations, other than its Indianapolis 500 and possible association with large plains and American Indians.

Since my arrival, I have had a paradoxical experience as a citizen from the Netherlands living in the United States. Contrary to Indiana, Holland seems to be very well known and is always identified with one or more of its characteristics: water, dikes, small size, prosperity, and merchants.

The issue of image or visibility overseas has become important for a state such as Indiana, especially since the devaluations of the American dollar in August 1971 and February 1973. The devaluations have improved this country's export position and have considerably boosted its attractiveness for foreign investors. The direct foreign investments in the United States amounted to \$14.4 billion by the end of 1972 and are expected to have increased during 1973 by nearly \$1 billion. The main investor countries are Canada, Japan, and the member states of the European Economic Community.

THE QUESTIONNAIRE

In order to gain a better view of Indiana's identity as compared to other parts or states of the United States, I presented a questionnaire

to eighty-four Dutch graduate business students during a visit to the Netherlands in January.

These students are enrolled in the master's program of the first Dutch school of management (a joint venture of the Netherlands School of Economics and Delft Institute of Technology). Each of them has an undergraduate degree in economics, engineering, or one of the social sciences. Several of them have one or more years of industrial experience. Their future careers will probably be in the area of general management, often with the larger Dutch (international) companies, or in government organizations.

The students are not representative of the whole Dutch population since only between 1 and 2 percent of Dutch citizens have had any kind of university education. It is not unreasonable to assume, however, that university students have a better knowledge of American geography and institutions than the average Dutchman.

When the questionnaire was presented to the students, they were not informed about the specific objectives other than that the purpose had to do with a test of general knowledge of and preference for regions and states in the United States. The questions were designed to probe three aspects relevant to Indiana's image overseas:

1. Do the students and future businessmen have a general idea or any knowledge about Indiana and the Midwest?
2. Are there reasons to believe that other areas or states are better (or less) known than Indiana?
3. Where does the Midwest rank for holiday travel and business locations as compared to areas such as the Atlantic Seaboard, the South, or the West?*

The first part of the questionnaire asked the eighty-four subjects to write down all the states they could name. Indiana appeared in thirty-

four answers or 40 percent. At first glance, this seems encouraging because on the average the students were able to name only fourteen states. Of the Midwestern states, Indiana was better known than Illinois (mentioned by 10 percent), Kentucky (23 percent), and Missouri (30 percent). Nationwide, those states mentioned as often as Indiana were Alabama (40 percent), Arizona (39 percent), and Michigan (39 percent). States that were familiar to more than half of the sample were California (50 percent), Alaska (66 percent), New York (80 percent), Ohio (60 percent), and Texas (80 percent). Washington, D.C. appeared in 60 percent of the questionnaires. Sixteen states were mentioned ten times or less.

The second question asked for the location of the Midwest. Nearly 30 percent of the subjects proved to be totally unfamiliar with its location. Those who had heard about the Midwest associated the area more with the Great Plains states (Kansas and Nebraska) than with the area south of the Great Lakes. Twenty-five students (30 percent) were able to mention that Indianapolis is the capital of Indiana.

The temptation to test the degree of association of Indiana with American Indian life could not be resisted. The students were asked to indicate which of the following states had presently one or more Indian reservations: Arizona, California, Colorado, Connecticut, Indiana, and Missouri. Most subjects checked Arizona and Colorado while leaving out Connecticut. Indiana was mentioned thirty-three times. In other words, 39 percent associated Indiana with the presence of Indian reservations, a result that is not surprising, given the state's name.

Finally, the two questions that provided discouraging answers (at least to Hoosiers and this Dutch author who are anxious to promote the state's image and visibility abroad) dealt with states, regions, or cities in this country that are preferred for vacation or business purposes.

*A copy of the questionnaire and its results are available on request from the Division of Research in the School of Business, at Indiana University.

With respect to vacation travel a clear preference exists for New York City and California. Approximately two-thirds of the students would visit these places if they had received a budget to "visit the U.S.A." Other areas that were mentioned with reasonable frequency (10-25 percent) were Florida, the Rocky Mountains, Washington, D.C., and Texas. Only five students indicated a visit to the Great Lakes and only one mentioned the Midwest. (Perhaps this student was inspired by the earlier question about the location of the Midwest. His colleagues apparently were not.)

With respect to the geographical location for business operations (work or investment) the subjects could indicate their preferences (by ranking) for five roughly described areas, which encompassed the entire United States. From the data a clear preference can be inferred for one of the Atlantic states (New York City was a separate choice) or for California. At a substantial distance follow New York City and its surrounding environment, the South, and in last place, the Midwest.

CONCLUSION

Before reaching any conclusions from the results one should be warned of the limitations that are inherent in acquiring data from business school students. *First*, these students are not (yet) businessmen. Their approach to and interest in countries are based upon different criteria than those used by the businessman, especially the one who has to select areas for overseas investments. *Second*, the sample is small and not adequate for making sophisticated analyses or drawing thoughtful conclusions. Dutch students who have entered a graduate business school can be considered as future decision makers; their knowledge of and preference for this country's states and regions are only to a limited extent representative of other parts of the Dutch population, let alone other Common Market countries.

The answers clearly indicate that Indiana is much better known than the Midwest. However, the state has little holiday or business appeal when compared to the Atlantic states or California. From a competitive point of view, I would argue that Indiana should try to acquire the reputation of being the state that is "next best to the two coasts," or that at least is more attractive for foreign investments than other noncoastal states in this country.

A lesson on how to focus the attention of foreign investors on an area can be learned from tiny Ireland. Long overwhelmed by the United Kingdom, Ireland also seemed too far out of the way from the European continent. During the middle 1960s a fervent advertising campaign was directed toward Europe to attract the attention of foreign investors. Simultaneously, the Irish government, through the Industrial Development Authority (IDA Ireland), provided necessary inducement such as tax incentives, sites, and infrastructure (such as transportation facilities and public utilities). As a result Ireland has developed the "image" of being an excellent European nation for investment. The advertising campaign made a considerable contribution to this since it not only stimulated (and still does) investors to contact the active IDA Ireland but also liberated the country from its geographical isolation. Since January 1973 the IDA Ireland has intensified its promotion activities in the United States, stressing Ireland's recent entrance into the Common Market.

With regard to Indiana a comparable approach may be considered. Presently, the Indiana Department of Commerce has an International Trade Department which is in charge of promoting Indiana export products and encouraging direct foreign investments. The department is of great importance in the provision of facilities to foreign investors. Indiana's attraction potential might sharply increase if the state decides to intensify its marketing abroad, stressing Hoosierland's unique location (within twenty-four hours of

eighty of the top one hundred markets of the United States), its transportation facilities, and its stable and relatively cheap labor force.

Indiana's transportation facilities are numerous. There are nearly 900 miles of interstate highways, placing Indiana eighth among the fifty states in terms of interstate roads completed. The state's ports at Jeffersonville and at the Southwind Maritime Centre on the Ohio River provide access to the Mississippi River. Burns Harbor on the south shore of Lake Michigan offers an economical outlet to the St. Lawrence Seaway. Indiana also has an exceptionally heavy concentration of railroad traffic on its 6,500 miles of tracks.

3.6 MILLION POTENTIAL HOOSIER VOTERS

The U.S. Bureau of the Census has projected that there will be 3.6 million Hoosiers of voting age for the elections of November 1974. This is an increase of 107,000 voters (about 3 percent) over the estimated number who were of voting age in 1972. For Senator Birch Bayh and Mayor Richard Lugar, there are 600,000 more potential voters to woo than there were in the Senator's last campaign of 1968.

If voter registration and turnout are the same this year as in 1972, we can expect about 2.2 million votes to be cast. Normally, a voter turnout in an "off" year will not equal that of a presidential election year, but 1972 was not a typical presidential year. Here in Indiana only 60.8 percent of the potential voters cast presidential ballots in 1972, compared with 70.7 and 76.3 in 1968 and 1960, respectively.

This is the first congressional election in a nonpresidential year in which 18- to 20-year-olds are eligible to vote since the ratification of the 26th Amendment to the Constitution. For the young who may not have exercised this privilege in 1972, this could be their first vote. There are an estimated 686,000 Hoosier voters in the 18- to 24-year-old age

Recently, a study of Indiana wage rates [Sion Raveed and William C. Renforth, "Shifting World Wage Rates: What Do They Mean for Indiana?" *Indiana Business Review* (September-October 1973), pp. 15-19] indicated that the wage levels in many Hoosier counties are less than rates in West Germany and Japan. (Indiana's personal income per capita is \$4,391, which is below the national average of \$4,478.)

By stressing these transportation and labor advantages, plus the state's central location, Indiana may be able to reduce its dubious distinction of being "somewhere between New York and California," according to a Commerce Department brochure entitled, "Indiana. We'd Like the Pleasure of Your Company."

Projection of Indiana's Voting Age Population November 1974 (18 years and older)

	All Races		Black	
	Number	%	Number	%
Total	3,603,000	100.0	233,000	100.0
18-24	686,000	19.0	54,000	23.2
25-44	1,335,000	37.1	91,000	39.1
45-64	1,058,000	29.4	63,000	27.0
65 and over	524,000	14.5	25,000	10.7

SOURCE: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 525 (Washington, D.C.: U.S. Government Printing Office, September 1974).

group, 19 percent of the projected pool of voters. Blacks account for nearly 8 percent of these young voters and 6.4 percent of all potential voters in the state.

An estimated 524,000 potential voters in the state this year are 65 years old or older. Inflation's impact may bring a high percentage of these older voters to the polls to express albeit indirectly, their preferences for alternative economic programs.

—M.J.M.

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XLIX

NOVEMBER-DECEMBER 1974

Indiana Business Review

Highlights of the Outlook—A Message From the Dean	1
The Outlook for 1975	2
Business Fixed Investment	3
Inventories	5
Residential Construction	5
Government Purchases of Goods and Services	6
Automobiles	8
Other Personal Consumption Expenditures	9
Net Exports	9
Interest Rates, Prices, and Money	11
Summary	13
The Indiana Economy	
Fort Wayne	15
Muncie	16
Indianapolis	17
South Bend-Elkhart	19
Southeastern Area	20
Evansville	21
Gary-Hammond-East Chicago	22
Terre Haute	24



Indiana Business Review

VOL. XLIX

NOVEMBER-DECEMBER 1974

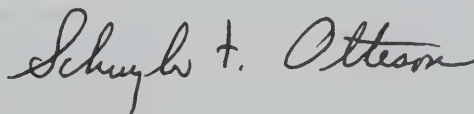
HIGHLIGHTS OF THE OUTLOOK—A MESSAGE FROM THE DEAN

The Indiana University School of Business presents its semiannual "Outlook" edition of the *Indiana Business Review*. A year ago the forecast of the "Outlook" team was more optimistic than most others produced at that time. This year, the team's outlook may be more pessimistic than most. The report concludes that "we are in the worst economic slump of the post-World War II period, and it may be late in the year [1975] before signs of an upturn are clearly visible." The forecast is for rather sharp declines in real gross national product in the fourth quarter of 1974 and the first quarter of 1975. Expectations are that the second quarter will show little improvement but that a slow recovery will begin in the third quarter of 1975 with some of the unpleasant characteristics of the recession beginning to disappear in the fourth quarter.

Unemployment is expected to rise above 7 percent, and it will probably remain that high until 1976. The rate of inflation as measured by the GNP deflator is expected to fall below 10 percent (annual rate) during the worst months of the recession, chiefly as a result of declines in some raw material prices. However, policy measures to stimulate the economy will probably accelerate the rate of inflation again when recovery commences. The Consumer Price Index (CPI) is likely to continue to rise at a 10 percent annual rate and perhaps substantially more.

Indiana's economy appears to have held up reasonably well so far, but most analysts expect the state to experience a greater decline than the nation because of its specialization in the production of durable goods, especially automobiles and parts. The reports from individual metropolitan areas generally indicate apprehension concerning local effects as the recession continues and deepens.

The "Outlook" is the product of a faculty team in the School of Business. The reports on individual metropolitan areas were prepared by analysts from each of the areas. We hope that this "Outlook" will provide useful information for public and private decisions during the next few months and that it will stimulate discussion of the issues involved.



Schuyler F. Otteson
Dean, School of Business
Indiana University

The Outlook for 1975

Economic forecasters bring tidings of little joy this holiday season. A year ago most forecasters, including this outlook team, were far too optimistic about 1974, and many of us may be overreacting by being too pessimistic for 1975. Nevertheless, it now seems clear that we are in the worst economic slump of the post-World War II period, and it may be late in the year before signs of an upturn are clearly visible.

With the considerable advantage of hindsight, it now appears that the current recession

began in the first quarter of 1974. It was in the quarter that real gross national product—that is gross national product adjusted for price changes—turned downward. This figure declined slowly in the second and third quarters and we are forecasting sharper declines in both the fourth quarter of 1974 and the first quarter of 1975. We anticipate a small upturn in real gross national product in the second quarter of 1975. But the movement toward recovery will be slow, and not until the fourth quarter of 1975 will the unpleasant characteristics of recession begin to disappear.

Even so, our fourth quarter 1975 figure indicates a performance of the American economy not yet up to the level of the latter half of 1973. Unemployment will still be well over the politically intolerable level of 7 percent of the work force, and there is small probability that

This issue of the "Outlook" was prepared by Ross M. Robertson, Eugene Brady, Howard G. Schaller, Robert C. Turner, and Michele Fratianni of the Department of Business Economics and Public Policy.
This forecast is consistent with the views expressed by the Economic Outlook Panel of the School of Business in statewide discussions presented in early December 1974.

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this figure will be substantially reduced until the return of a reasonably healthy economy in 1976.

The question of the day is, of course, what will the rate of inflation be in 1975? As the figures in the accompanying table show, we do not foresee a politically acceptable slowdown in the rate of price increases. The rate of inflation measured by the GNP deflator may dip below 10 percent, perhaps to 8 percent during the worst months of the recession. Public policy measures taken to stimulate the faltering economy and reduce the rate of unemployment, however, are likely to accelerate the rate of inflation again when the recovery gets underway and long before an acceptable level of unemployment is reached.

The decline in the inflation rate will be less, as measured by the Consumer Price Index (CPI). The CPI is more heavily influenced by the two types of prices that almost certainly will continue to rise, perhaps at an accelerated rate: food prices and service prices, which are largely wage costs. There seems to be little likelihood of any decline in the rate of increase in wage rates in 1975. However, the GNP deflator is relatively more influenced by prices of nonagricultural raw materials incorporated into goods—consumer durables, residential and commercial construction, and goods purchased by government. The only relief to inflation might appear to be in the nonagricultural raw materials area, notably certain internationally traded metals and minerals.

Because of the stickiness of the inflation problem, there may be an overwhelming congressional demand for a return to wage and price controls despite Administration opposition and despite the sorry record of such controls in restraining inflation over more than short periods of time. We have based our forecast on the assumption that the price system will be left largely untrammelled to allocate resources in spite of continuing inflationary pressures.

BUSINESS FIXED INVESTMENT



In our "Outlook Edition" last May, we wrote that the forces underlying the capital expansion that began in early 1971 would continue throughout 1974 and into 1975, but we also cautioned against acceptance of the hypothesis then being advanced that a two- to three-year capital boom might begin in late 1974 or early 1975. Our caution now seems well-advised. Capital spending advanced by only 8 percent (on a seasonally adjusted annual rate basis) during the third quarter of this year, and this was less than the increase in the prices of capital goods. Thus, real outlays actually fell slightly.

Our present forecast shows an outlay gain of 9.7 percent for 1975 over 1974 in current dollar figures. This means that real expenditures will not increase. The biggest price increases have yet to hit the capital goods market, and they are expected to be the greatest in twenty years, according to Douglas Greenwald, chief economist for McGraw-Hill.

Some industries anticipate substantial increases in both current dollar outlays and real capital accumulation. Mining, petroleum, chemicals, iron and steel, and railroads are examples of such industries. However, public utilities foresee a constant current dollar outlay and hence a decrease in real expenditures for the first time in several years. For textiles, airlines, rubber, and autos, we actually foresee a decline in current dollar outlays and thus rather substantial declines in real capital spending. Moreover, the picture is probably not very bright for the not-for-profit institutions; their portfolios have had trouble in recent years and their cash flows have to be directed for the most part to meeting operating costs.

The bleak picture we are painting is in part the result of energy shortages and the related

Forecasted Gross National Product by Sector

(All dollar figures in billions at seasonally adjusted annual rates*)

	1974		Q1	1975		
	Q3†	Q4		Q2	Q3	Q4
Government purchases of goods and services	312.3	320.0	327.9	335.0	345.2	357.1
Federal	117.2	119.5	122.1	125.0	128.7	132.1
Defense	78.4	80.5	82.6	84.4	86.5	88.1
Other	38.8	39.0	39.5	40.6	42.2	44.1
State and local	195.1	200.5	205.8	210.0	216.5	225.1
Gross private domestic investment	205.8	199.5	200.6	209.5	221.2	233.1
Business fixed investment	150.9	155.9	159.0	163.2	167.2	172.1
Residential structures	46.2	40.2	42.6	47.5	52.0	57.1
Inventory investment	8.7	3.4	-1.0	-1.2	2.0	4.1
Net exports	-4.0	-4.5	-4.6	-4.8	-5.5	-6.1
Personal consumption expenditures	901.3	904.6	913.9	933.5	957.4	998.1
Automobiles	56.2	45.2	41.5	42.2	43.0	45.1
Other	845.1	859.4	872.4	891.3	914.4	953.1
Gross national product	1,415.4	1,419.6	1,437.8	1,473.2	1,518.3	1,583.1
Annual rate of increase	9.1%	1.2%	5.1%	9.8%	12.2%	17.1%
Implicit price deflator	172.0	176.2	179.8	183.4	187.1	191.1
Annual rate of increase	11.2%	9.8%	8.2%	8.0%	8.1%	9.1%
Gross national product (1958 \$)	822.7	805.7	799.7	803.3	811.5	827.1
Annual rate of increase	-2.1%	-8.3%	-3.0%	1.8%	4.1%	7.1%
Personal income	1,168.2	1,179.7	1,196.2	1,222.8	1,257.2	1,311.1
Disposable personal income	993.1	1,002.7	1,018.0	1,040.6	1,068.6	1,113.1
Net personal saving	65.5	72.1	78.1	80.1	81.1	87.1
Saving rate	6.6%	7.2%	7.7%	7.7%	7.6%	7.1%

*Details may not add to totals due to rounding.

†Revised as of November 15, 1974.

rise in energy prices, plus the difficulties in obtaining deliveries. The high interest rates of the past year have been a factor, especially in the case of public utilities. Moreover, capital spending is beginning to react to the decline in the economy much as it did in the 1957-58, 1960-61, and 1969-70 recessions. Some industries are anticipating a decline in demand and are reluctant to commit themselves to expanding capacity.

The failure of real capital spending to advance is disappointing because the economy needs the expansion in real capital accumula-

tion to boost productivity. When we remember that capital consumption will continue and that the size of the labor force will be growing during this period, it is evident that we need a sustained period of vigorous capital formation to make the gains in productivity that are required, both to increase real output and to keep costs—and therefore prices—from rising unduly. Perhaps President Ford's investment tax credit proposal merits consideration, not only from the standpoint of being a stimulant to aggregate demand but also as a means of contributing to productivity gains.

INVENTORIES

The rate of inventory accumulation has fallen off sharply during the third quarter of 1974, and many observers fear that a sharp drop in inventory accumulation, and possibly even inventory liquidation, could add further softness to a declining economy. The last half of 1973 and the first half of 1974 were marked by an unusually rapid buildup in inventories. On a seasonally adjusted annual basis, business inventories rose by \$28.9 billion during the last quarter of 1973 and increased by \$16.9 billion and \$13.5 billion in the first and second quarters of 1974, respectively. Inventory accumulation was off sharply to \$8.7 billion in the third quarter of 1974, and many companies would like to see their inventories further reduced.

Business inventories are still puzzling, although we expect that the process of inventory adjustment to current and expected sales will be largely completed by this coming spring. Current efforts of firms to cut down excess inventories are already leading to scattered price cutting at the wholesale price level. However, because of the distinct possibility that a Democratic Congress will reimpose wage and price controls, no firm wants to be caught with its wholesale prices down, and few cuts are being made in wholesale list prices.

Inventory accumulation of the last three quarters has been of two distinct sorts. *First*, producers of finished goods have stockpiled raw and semifinished materials to insure that their production needs will be met. Now that many raw materials are no longer in short supply and the prices of many raw materials are falling, inventories of this sort are no longer deemed necessary. *Second*, the decline in consumer demand for automobiles and other durables that suddenly developed in the fourth quarter

of 1974 has signaled a softening of expected future sales. Unwanted inventories of new cars (surprisingly, Vegas and Pintos as well as the larger models) are accumulating. Consumer durables such as appliances and color TV sets, normally in short supply in the pre-Christmas period, are piling up unsold.

The lumber industry has been hard hit by the current slump in residential housing, and lumber mills on the West Coast find their inventories of lumber and plywood about 40 percent higher than they were a year ago. Because backlogs of unfilled orders are being canceled in many industries, many companies are trying to delay deliveries of raw materials to their nearly full warehouses. With the recent declines posted by many of the leading economic indicators, a further softening of demand will add further to the inventory glut.

Because of rising wholesale prices, last year's inventories proved to be profitable to most firms. However, in terms of the currently pessimistic economic picture, inventory accumulation could be troublesome for many companies. Inventories could actually decline in real terms in the first half of 1975.

RESIDENTIAL CONSTRUCTION



There are strong indications that the slumping housing market will begin to recover next spring. Paradoxically, the continuation of the recession into 1975 is a good sign for the housing industry. The bleak outlook for the economy is likely to induce the monetary authorities to increase reserves to the banking system in order to stimulate money supply growth and thus to reverse the general decline in economic activity.

The current housing slump was caused by unusually high short-term interest rates, which caused savings deposits to be taken out of the thrift institutions and placed in higher yield,

short-term money market assets. Now that short-term interest rates have started to come down again, savings are beginning to flow back into savings and loan associates and mutual savings banks. While current net inflow is still only a trickle, it represents a reversal of the savings outflow that thrift institutions have experienced over the course of the past several quarters. Continuous substantial inflows of savings to thrift institutions would have a positive impact on the currently tight mortgage market next spring.

The housing industry recovered rapidly from the last two major credit crunches, and we feel that the recovery of the industry in 1975 will be equally swift. Following the 1966-67 period of credit stringency, housing starts moved sharply upward in 1967 and rebounded again in 1970 and 1971 to record highs, as the financial disintermediation of 1969-70 reversed its course. Whether the recent sharp decline in short-term interest rates was prompted by an easier monetary posture of the central bank or massive purchases of short-term Treasury securities by oil-rich countries, it is causing funds to move again into thrift deposits. Indications of a recession more severe than previously expected, coupled with some lessening of the rate of inflation, should put more downward pressure on both short-term and long-term interest rates, which will lead to a further recovery of the residential housing industry.

Some direct measures have been taken by government to stimulate the housing industry. Emergency legislation was signed by President Ford in mid-October. The Emergency Home Purchase Assistance Act of 1974 permitted the federal government to pump about \$7.75 billion into the mortgage market through the Government National Mortgage Association and the Federal Home Loan Mortgage Corporation. These two agencies will be able to purchase conventional mortgages on one- to four-family homes at interest rates pegged to the yields on six- to twelve-year Treasury securities. The first phase of this legislation has been quickly implemented; the initial mortgage rate was 8.5

percent with a primary distribution of \$ billion.

Housing and mortgage market specialists view the government housing program as being inadequate to offset the current housing slump, which has seen the annual rate of housing starts decline by nearly 1.5 million units from a peak of 2.5 million starts at the end of 1972. Federal officials estimate that the emergency legislation will stimulate the production of about 100,000 dwelling units, but private estimates are much lower.

In the absence of substantial federal assistance to residential housing, many state agencies are attempting to bolster the housing industry by selling tax-exempt revenue bonds using the proceeds to purchase federally insured mortgages on single-family homes from thrift institutions. Thirty-three states have set up housing development commissions of various sorts; eleven state agencies were established within the past two years.

These agencies are beginning to have a strong impact on housing at the state level. State housing agencies have issued a whopping \$4.5 billion of tax-exempt revenue bonds to date, representing about 6 percent of all state and local debt offerings. The rates of interest on state agency loans, both for construction loans and for permanent financing, typically run one to two percentage points below market rates—effectively reducing the cost of home ownership. State assistance to housing will play an increasingly prominent role in the future.

GOVERNMENT PURCHASES OF GOODS & SERVICES



Federal Government

In January 1974, President Nixon proposed a budget for fiscal year 1975 involving outlays of \$304.4 billion, subsequently revised upward

\$305.4 billion to reflect reestimates for such items as offshore oil receipts (an offset to outlays), interest on the public debt, and unemployment benefits. Of this total, according to the Office of Management and Budget (OMB), \$121.2 billion would be used to purchase goods and services, an increase of 10.3 percent from fiscal 1974—less than what proved to be the rate of inflation. The remaining \$184.2 billion is accounted for by transfers of various kinds, including interest on the public debt, which is counted as a “transfer-like” payment in the income and product accounts.

Of the \$121.2 billion total for purchases of goods and services, \$82 billion goes to national defense with \$39.2 billion left for nondefense programs. The Congress has since cut the defense appropriation by \$5 billion, of which \$2.5 billion will be reflected in outlays during fiscal year 1975. It is expected, however, that a supplemental \$1.7 billion will be appropriated later to fund a scheduled pay raise for national defense employees.

In addition, further supplemental budget requests can be anticipated as inflation takes its toll of defense programs. Further, given the prospective level of unemployment and increasing concern about Mideast tensions, it is likely that resistance to cutbacks in defense programs will grow. We estimate, therefore, that defense expenditures will not be substantially below the \$82 billion figure projected in the revised budget. Indeed, this projection may prove to be low if international developments are less favorable than we have assumed in this forecast.

In response to President Ford's pressure for a \$5 billion cut in the budget for fiscal year 1975 to \$300 billion, the Congress has chiseled minor amounts from numerous nondefense programs in addition to cutting the defense budget. But the Congress has appropriated more than the President proposed for several programs, including veterans' benefits, small business loans, and school lunch programs. The net effect is a significant increase in the budget. Although most of the changes are in transfer programs, not in purchases of goods and

services, it is our estimate that, when the fiscal year has ended, we will find that nondefense purchases of goods and services will exceed the figure officially estimated by the OMB last May. It seems probable that the total budget will not only *not* be reduced to \$300 billion but will significantly exceed the original \$305.4 billion figure.

The last half of 1975 falls in the fiscal 1976 budget year. As of this date, we have no firm information on the fiscal 1976 budget. Advance estimates depend on how seriously one takes the rhetoric of the recent political campaign. During the coming months, the developing recession, with its accompanying rise in unemployment, suggests that much of the pressure for cutting federal government expenditures may evaporate and that new nondefense programs may be enacted to reduce unemployment.

Furthermore, if the inflation rate continues as we have projected, increases in current dollar expenditures will be needed to continue programs at the same real level. Supplemental budget requests can be anticipated. Our estimates for the last half of 1975 are largely guesses, but intuition tells us that significant increases in both defense and nondefense purchases of goods and services are in the cards.

State and Local Governments

State and local government expenditures in the first three quarters of 1974 were essentially flat in real terms, in contrast to a steady rise over the past several years. There are two major reasons for this flatness. *First*, school enrollments in most localities are stable or declining. Consequently, school construction has almost come to a halt, and teachers and other personnel have been reduced in numbers.

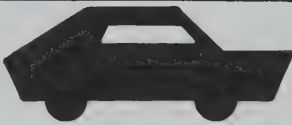
Second, like nearly everyone else, legislative bodies did not foresee the degree of inflation that in fact occurred in late 1973 and 1974. School appropriations allowed for only a modest degree of inflation, if any, and school

administrators have been forced to accommodate to actual inflation by curtailing real programs more than was originally planned in the budget.

Other state and local programs, chiefly health and highway, have grown in real terms to meet the needs of an adult population that is still growing and demanding more and better services. But even these programs have been caught in the squeeze between rising prices and fixed appropriations.

State and local revenues, however, do respond to inflation, though after a lag. In the case of revenues from sales taxes, the lag is fairly short; it is longer for income taxes and quite long for real estate taxes. A price increase to one person is a money income increase to someone else, and even when the increase in incomes is solely because of inflation, state and local revenues rise in due course. For the last half of the 1975 calendar year (when a new fiscal year begins) inflation-induced increases in tax revenues will permit state and local expenditures to rise again in real terms. The percentage increase will not be as large as it was a few years ago, but current dollar expenditures will probably outpace inflation.

AUTOMOBILES



The 1975-model cars are not selling well at all, and the auto industry is suffering its worst slump in ten years. The Big Three attribute the downturn to the current economic slump, to the generally depressed mood of consumers, and to President Ford's speeches stressing thrift and parsimony. Other contributing factors to the softness in automobile sales include the big price increases announced for 1975 models and the relatively restrictive terms of automobile financing in some geographic areas.

U.S. automobile producers have to some extent become victims of their own recent

pricing policies. They announced sharply higher prices on the 1975 models last summer, hoping that the stock of lower-priced 1974 models would be snapped up by the car-buying public. There was indeed a surge of purchasing of the year-old models late in the 1974 model year, thus spoiling the market for the 1975 models when they were introduced.

There is little basis for optimism in personal consumption expenditures for automobiles and parts. Nearly all of the factors affecting the sector appear negative; the most important factor is consumer attitudes. Auto purchases are not going to be a buoyant force in the economy during 1975, but there is some hope that this sector will improve during the last two quarters of the year.

Our forecast for automobile sales rests on two basic assumptions. *First*, there will be no significant change in the current "fuel climate." Gasoline will be available during 1975 at a price without a price variation of more than 10 percent. *Second*, there will be no major change in international trade policy.

From all indications, two major forces are presently having the greatest influence on automobile sales: prices and economic uncertainty. The automobile is both a large purchase and a postponable purchase. Indeed, because it is a large expenditure, the incentive for postponement is powerful, particularly when the consumer is faced with the following factors:

Price increases on 1975 models have averaged over \$400.

Inflationary pressures have taxed family budgets for expenditures on such necessities as food, rent, and clothing.

Record high automobile sales years in recent years have provided many households with late-model automobiles.

There is continued apprehension concerning the availability of fuel, coupled with lack of a significant increase in fuel economy in the 1975 models.

Greater uncertainty has been created by sudden changes in safety and emission standards such as the seat-belt interlock system. Since the recent congressional action, people are asking: "Is the interlock system now on the

1975s? If so, is it operational? Do I have to pay for it? Will cars come down in price when it is removed at the factory?"

Finally, there is continued uncertainty about the size of car to buy, a problem that is amplified when the consumer finds that price differentials among compact, intermediate, and standard models have diminished significantly.

With automobile sales down, we are forecasting 1975 to be about 13 percent below 1974 for personal consumption expenditures on autos and parts. This figure assumes that price increases per car will be nearly offset by a trend toward smaller cars so that the average expenditure per auto will remain about the same. We do see some improvement, largely because of less uncertainty, during the second half of 1975 when the 1976 models come out.

OTHER PERSONAL CONSUMPTION EXPENDITURES



The real income of consumers has declined rather sharply in the last year. Although personal income has risen by about 8.7 percent in current dollars, the consumer price index has gone up 12.1 percent. Thus, aggregate real income has declined about 3.5 percent and has fallen even more when figured on a per capita basis. In addition, because of the rise in unemployment in the last half of 1974, consumer-workers are facing a more uncertain market for their labor.

Households have also had their wealth positions eroded by the slumping stock market. More than \$200 billion in asset values have been wiped out in securities trading on the New York Stock Exchange alone, and when this current dollar loss is adjusted for changes in the absolute price level, the real erosion of net worth is even greater. When adjusted for price level changes, the stock market decline in the 1973-74 bear market was even greater than that of the 1929-34 period. Although the percentage decline in the current dollar value of securities

was greater in the 1930s, the price level declined by about 30 percent during that period. Conversely, prices rose by about 15 percent in the 1973-74 period.

In view of the losses of both real income and assets that have hit consumers in the last year, it is not surprising that consumer demand has suddenly turned soft. The prospects for a continued recession for at least part of 1975 and the possibility of further layoffs have caused consumers to become more cautious in their spending habits. Postponable items, such as automobiles and larger appliances, are not being purchased, as households make do with the durable goods they now own. In effect, consumers are and probably will continue to accommodate to shrinking real incomes by shifting their spending from durable goods to nondurable goods and services, many of which are considered to be essentials of life.

On balance, we foresee a rise in the saving rate during 1975, the small rise in the proportion of income spent on nondurables and services being more than offset by the decline in the proportion spent on automobiles and other durables. Consumers could provide more of a lift to economic activity than we have postulated if their confidence in the economic future is restored and if their resistance to inflated prices diminishes. But it is our guess that this will not happen until late in the year and possibly not until 1976.

NET EXPORTS



Concern over the ability of the United States to maintain a favorable net export position (exports minus imports of goods and services) has been rising. Much of this concern, quite correctly, has centered on the effect of sharp increases in oil prices. In the last "Outlook" we forewarned our readers that the lifting of the export embargo by the Mideast countries would

mark the beginning, rather than the end, of serious economic problems for the United States and the oil-consuming countries. For the United States the estimated export fuel deficit for the current year is \$25 billion, as compared to an \$8 billion deficit for 1973. This unprecedented surge in the U.S. oil bill is a direct outcome of the 370 percent increase in the average import unit value of petroleum that has taken place during the past year. For 1975 we estimate the net oil deficit will be \$26 billion.

The two other major components of the U.S. trade balance—agriculture and manufactured goods—have largely offset the oil deficit. As world prices of foodstuffs have risen, so has the value of our net agricultural exports, which are estimated to average \$11.5 billion in 1974. The United States also enjoys a clear competitive position in the world markets in manufactured goods, especially in capital goods and in chemical products. The net export surplus for all manufactured goods is forecast to be around \$6 billion in 1974.

Exchange Rates

The two devaluations of the dollar in December 1971 and February 1973 resulted in delayed but beneficial effects regarding export stimulation. After two years of deficit trade balances, U.S. net exports returned to a surplus level in 1973. Net exports grew throughout 1973, reaching a peak in December. To a large extent the growth in net exports came as a result of the devaluations.

The immediate effect of the currency devaluations produced little change in net exports. However, once foreign demand had time to adjust to the new lower prices of exports and domestic U.S. demand recognized the higher prices of imports, the second-round effect of increases in net exports occurred.

Today we are living in a world of floating exchange rates, whether "clean" or "dirty" floats. Our long love affair with fixed rates has ended and so has the economic subjugation of

accepting an inflation rate equal to the world rate of inflation. While it is widely publicized that the world is suffering from double-digit inflation, it is seldom pointed out that there is a wide dispersion of inflation rates in industrialized countries and that movements in exchange rates largely reflect differences in inflationary experiences in these countries.

With this concept in mind, it is hardly surprising that the dollar (as a result of the acceleration of inflation in the United States) has recently depreciated vis-a-vis most European currencies. Because Germany and Switzerland have been pursuing strong deflationary policies, the depreciation has been especially sharp with respect to the German mark and the Swiss franc. The dollar has appreciated, however, vis-a-vis the Italian lira, a currency losing purchasing power at a rate now approaching 30 percent a year. Our predictions of the exchange rate movements thus depend on how we view the future course of inflation in the United States and in the rest of the world. Our judgment is that we will do better than England, Italy, and France but worse than Germany and Switzerland. The position of the dollar is forecasted to improve with respect to the trade-weighted average of major world currencies.

Growth in Output

Growth in U.S. output began to level off in the fourth quarter of 1973. It has declined throughout 1974 and is expected to further decline into the first quarter of 1975. In Western Europe, Canada, and Japan—the major export markets of the United States—output growth rates have also declined since 1973. England and Italy, the two most troubled nations of Western Europe, are clearly experiencing a pronounced recession.

The industrial output of the world will start climbing again in 1975, with Japan and West Germany showing the most vigorous recovery. The business recovery of our trading partners

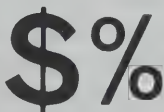
will be more forceful than recovery in the United States. Since the strength of our exports is intimately tied to the well-being of our buyers, economic growth in Europe, Japan, and Canada will provide a favorable stimulus for U.S. exports of manufactured and agricultural goods.

Relative Prices

We have recently witnessed a sustained rise in the prices of American exports relative to the prices of foreign goods. In part, this change resulted from a general appreciation of the dollar following the two devaluations of 1971 and 1973. Such a movement contributes to a slowdown in demand for our exports. Although our terms of trade were better in 1974 than in 1973, they remained considerably below their 1972 levels.

To summarize, in 1975 we forecast a \$26 billion oil deficit, a \$6 billion surplus in manufactured goods, and a \$10 billion surplus in agricultural commodities, thus leaving a trade deficit of \$9 billion. If we add to this figure net military expenditures of \$2 billion, a net travel and transportation expenditure of \$2.8 billion, and a net investment income of \$8.5 billion, we obtain an overall deficit of over \$5 billion for 1975 as a whole.

INTEREST RATES, PRICES, AND MONEY



Prices and Money

We do not anticipate any substantial lessening of the rate of inflation in 1975. We reach this conclusion despite the fact that, if our forecast is correct, a decline in real demand will occur during the year. The current and prospective rise in the price level is clearly not a demand-pull inflation.

However, we live in an inflation-prone economy. Business firms in administered-price industries resist lowering their prices; it is significant that, in the face of a probable decline in demand for 1975 model automobiles, the automobile companies raised their prices by about 10 percent. Workers, whether organized or not, rarely will agree to a cut in wage rates and typically demand increases at least equal to the recent or anticipated rate of increase in the cost of living. Indeed, cost-of-living escalators are now written into most labor contracts. Numerous provisions are written into state and federal law to prevent or minimize price competition among sellers and to protect various groups from reductions in their incomes as a result of price decreases.

These influences mean that a price-wage spiral, once started, is extremely difficult to stop. Higher prices mean an increase in the cost of living; an increase in the cost of living leads to demands for higher money wages; higher money wages mean higher costs of production; and higher costs of production lead to higher prices.

The experience of recent recessions indicates clearly that it would require a dampening of demand far beyond that which is humanely and politically tolerable to break this price-wage spiral. We do not predict such a drastic decline in demand.

Theoretically, a complete restructuring of our economy, complete enough to achieve a high degree of effective price competition in both product and labor markets, would break or at least slow down the wage-price spiral. But such a restructuring, requiring widespread dissolution of large corporations and of labor unions, also does not appear to be politically acceptable.

Further, inflation is a world-wide phenomenon. We now have a floating exchange rate that—if allowed to float freely and in the absence of barriers to international trade and capital flows—would insulate the United States *on the average* from price level changes else-

where in the world. But even under the assumed conditions, price increases in strategically important individual products (for example, oil) can have disruptive inflationary effects in the United States.

Similarly, an increase in food prices as a result of crop failures at home could and theoretically should induce price declines in other commodities and services as consumers shift their income spending from nonfood to food items. In practice, it seldom works that way. Prices of nonfood items are resistant to declines, especially at the retail level. The increase in food prices, of which consumers and workers are especially conscious, is more likely to simply lead to demands for increases in wage rates to offset the increase in the cost of living.

Price and wage controls are often proposed as a means of stopping the spiral. The 1971-74 U.S. experience with these controls is not encouraging. During World War II, they worked moderately well for two or three years, but they were supported by an extensive regimen of rationing and allocation controls, a "no-strike" pledge, and a broad consensus rooted in patriotism. We see little likelihood of such a consensus developing in the near future, and we believe that the American people would rebel against the degree of economic regimentation needed to make a broad control system work.

Consequently, it is our judgment that inflation will continue. It will be dampened somewhat by sagging demand and the high rate of unemployment that we foresee for 1975. Further, highly selective price controls may be imposed in particular industries where the rate of inflation is clearly excessive. (According to trade sources, many companies are now raising their prices more than they would otherwise in anticipation of the possible reimposition of price controls.) But if such controls are reinstituted, they will serve only to moderate temporarily the rate of inflation.

Moreover, if the unemployment rate does go above 7 or 8 percent, as we suggested earlier,

the federal government is likely to take steps to stimulate economic activity via easier money and increased government spending or, possibly, a tax cut. If this happens, the dampening effect of sagging private demand would be lessened. It is for this reason that we foresee after some lessening in the inflation rate next spring, an acceleration again later in the year.

Interest Rates

As indicated elsewhere in this article, interest rates have declined throughout the term structure in the fourth quarter of 1974. In fact, after a tentative downward movement in July, short rates of interest have fallen steadily since late August, some by as much as three or four percentage points. Although the prime rate charged borrowers by money-market banks has lagged behind other short rates in the current decline, the federal funds rate, as well as rates on large ninety-day certificates of deposit and commercial paper, have moved steadily toward the levels from which the drastic upsurge began in late February of 1974.

The recent turnabout in interest rates has been remarkably different from the retracement from high rates after the severe credit stringency of 1969-70. In that episode, intermediate- and long-term rates responded very slowly to the break in short rates, with a lag of several months before the bond market produced a significant rally. This time, long-term rates continued their upward course for perhaps six weeks after the downturn in the short rates and then began to recede. By mid-November, yield declines on medium-term issues were from one to nearly two percentage points and long-term issues from one-half to nearly one and one-half percentage points.

All this is not to say that a return to the level of interest rates of the late winter of 1974 is plainly imminent. For one thing, the shift in monetary policy that seemed evident

October has been gradual indeed, and there are no clear signs that Federal Reserve has any immediate intention of effecting an abrupt relaxation of the firm grip held on the money stock since early summer. Moreover, as long as inflation continues at present rates, the "Fisher effect," described in previous "Outlook" articles, will be operative; that is, lenders will demand and borrowers will be willing to pay some premium to offset the erosion of the values of their principal sums resulting from the continuously decreasing purchasing power of money. But the signs are hopeful for a substantial further drop in long rates—sufficient we think to be of great assistance to the urban residential mortgage market and sorely pressed public utilities.

SUMMARY

Total GNP is measured by real GNP, the forecast indicates a sharp decline in the current fourth quarter at annual rate of 8.3 percent, followed by a further decline at an annual rate of 3 percent in the first quarter of 1975. The second quarter shows little change from the first quarter. The small rise in the second quarter is chiefly due to a modest upturn in residential construction plus a rise in government expenditures.

The second half of 1975 will indicate a recovery at a 6 percent annual rate, above the normal long-run growth rate. However, even in the fourth quarter the GNP in 1958 dollars will be well below the prerecession level reached a year earlier. Full recovery will not come until 1976.

Normal GNP capacity is growing at about a 4 percent annual rate. Unemployment can therefore be expected to exceed 7 percent late this year or early next year and may approach and possibly exceed 8 percent before the recession is over.

Consumer expenditures for nondurables and services, in current dollars, will rise modestly throughout the year, but durables will be weak until the latter part of 1975. The net personal saving rate will rise to nearly 8 percent as consumers save their dollars instead of buying automobiles and other big-ticket durable goods.

Disposable personal income in current dollars will be maintained by unemployment compensation and a rise in social security benefits (now tied to the Consumer Price Index). In real terms, however, disposable personal income will decline in the first half of 1975 and not rise much until late in the year.

The inflation rate, as measured by the GNP deflator, will decline in early 1975 as a result of sagging demand, and may drop briefly to about 8 percent at the trough of the recession. Assuming that no price-wage controls will be initiated, however, an acceleration of the inflation rate is expected to occur late in the year and to continue into 1976.

Our forecast calculations for this "Outlook" edition were made before the coal strike negotiations were completed, on the assumption that the strike would be relatively brief. Although the strike has already lasted longer than we anticipated and has had some adverse secondary effects, they have not been great. The acceptance by the miners of the contract negotiated in Washington would seem to assure the uninterrupted production so badly needed to prevent more serious adverse effects on the economy.

The forecast does not assume a major antirecession program by the federal government, though it does assume a significant easing of monetary policy and an easier fiscal policy than the Ford Administration is now contemplating. The proposal for a 5 percent surcharge has apparently encountered too much political opposition for passage.

The foregoing analysis suggests that the twofold problems of a flagging economy and continued inflation will not be resolved in 1975. For many people the year will be one of

declining real income, and for those who are unemployed it will be a year of serious hardship. We may take some measure of cheer, however, in the near certainty that there will be no economic deterioration remotely approaching that of the 1930s. The automatic stabilizers such as unemployment compensation are already operating to prevent a cumulative downward spiral. The Federal Reserve has

clearly moved to a somewhat easier monetary policy, while trying to avoid a rapid increase in the money supply and bring on mounting inflation with renewed fury. Despite the reduced liquidity of American households and business firms, there is little likelihood of a financial crisis of any magnitude. In general, the word "recession" is still more appropriate to our plight than the word "depression."



The Indiana Economy

Introduction by Richard L. Pfister and Morton J. Marcus

In the May-June 1974 "Outlook" edition, we noted that Indiana had not shown its usual high degree of sensitivity to national business declines. At that time (first quarter, 1974), Indiana's employment appeared to have experienced a lesser decline than the national average. Even as late as September, Indiana's unemployment rate, seasonally adjusted, was 5.4 percent, which was below the national average of 5.8 percent. The reports from the various metropolitan areas indicate that most have had declines smaller than the national average.

More recent federal data, however, indicate that the Indiana economy may have lagged behind the national economy in the first half of 1974. The U.S. Department of Commerce estimated that Indiana's total personal income rose only .8 percent between the fourth quarter of 1973 and the second quarter of 1974; the national average increase was 3.2 percent. The state's increase in nonfarm income was below the comparable national rate, with the difference in rates greater than that between Indiana's farm income increase and the U.S.

farm income increase. The quarterly estimates of state personal income are sometimes revised substantially, so perhaps we should not attach too much significance to current estimates.

The old, established pattern of high sensitivity to national changes seems likely to reassert itself—if it has not already done so. Indiana's relative specialization in durable goods will probably lead to a sharper than-average decline as the recession continues and deepens. The worst of the cutbacks in these activities are yet to come and have not shown up in the latest statistics. The early months of 1975 should be the low period for employment in automotive-related industries. Increased attention to maintenance and the postponement of new car purchases may provide strength to sales in the after-market for automotive parts. Because many Indiana plants produce for this market and are not engaged in the assembly of new cars, we may experience cutbacks that are relatively less than national production layoffs.

Employment in electrical machinery (ap

nces and TV sets) is well below the level of a year ago and promises to drop considerably more as sales continue to weaken. Employment in steel mills was about the same in September 1974 as it was twelve months earlier. Reports are appearing, however, that the demand for certain steel products is weakening. As the national economy continues its downward slide, the demand for steel (and employment in steel production) could drop rather sharply.

Two sectors of the state's economy, agriculture and mining, can be strong in 1975. After the most favorable conditions of 1973, Indiana agriculture is expected to have a comparatively poor year in 1974 with production of both corn and soybeans down by at least 20 percent from their 1973 levels and with prices lower than a year ago. Next year, favorable weather conditions combined with higher commodity prices could result in a more buoyant farm sector. Once the coal mines are back into full production, employment and output prospects continue to be favorable for Indiana mining.

Reduced consumer buying in the coming months will have an effect on nonresidential construction and heavy duty automotive engines and parts well into 1975. During 1974 these two areas have been strong. With reduced consumer spending, capital investment will fall, and those firms providing construction services and heavy equipment for capital improvements will experience more difficulty.

Unemployment will certainly rise in the state during the next few months. The impact of personal income will be softened by unemployment insurance and by the programs of some unions to help maintain incomes during periods of unemployment. For instance, some members of the United Auto Workers who are laid off can, under certain circumstances, receive up to 95 percent of their regular pay for a limited time. Rising unemployment plus continued high inflation does undermine consumer confidence, so that consumer spending will probably fall faster than personal income.

FORT WAYNE

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The Fort Wayne metropolitan area has continued, at least on an aggregate basis, to remain relatively immune from the nation's current economic ills. However, one of the major sources of immunity—a consistently healthy durable goods manufacturing sector—is showing signs of weakness. Given the likelihood that durable goods sales are going to decrease and the state's sensitivity to changes in durable goods production, the current economic downturn will undoubtedly be a burden to local economic growth in the next six months.

Nonagricultural employment peaked in June at 163,800 with October employment at 162,000. Since there has been no growth in the labor force, the unemployment rate has remained in the 3.5-4.0 percent range (seasonally adjusted) after a rise of approximately 1.0 percent following the oil embargo.

Transportation manufacturing activity in the Fort Wayne area must be viewed with concern. Automobile sales for 1975 are 20 to 25 percent lower than the 1973 sales, but one must remember that 1973 sales set a record. And, given the consumer's current economic plight, a quick turnaround is unlikely. An analysis of motor home factory shipments data indicates that sales have risen above the low point of approximately 4,000 units per month (December 1973-February 1974), which was experienced during the oil embargo. Sales rose to approximately 7,000 in September (on a seasonally adjusted basis). This sales level is comparable to 1971 sales but far below the record rate of 10,650 units per month that was achieved in 1973. These facts do not indicate

an expansionary outlook for the short-run future of transportation component manufacturing in the Fort Wayne area.

Heavy duty truck manufacturing continues at top speed; however, signs of the inevitable downturn are beginning to appear. Order backlogs for heavy duty trucks are huge but are misleading because order firmness is questionable and there has been significant multiple ordering.

Locally, International Harvester may be able to counter the trend. IH's market share has been increasing, and it has been moving aggressively in the export market as evidenced by its recent record-breaking \$50 million sale of 2,000 tractor-trucks to Iran. The trucks will be delivered over a period of several months. IH has reported that it is considering the movement of Scout production out of Fort Wayne and the conversion of the vacated space to further heavy-duty truck production. If this action occurs, more severe cycling will probably be introduced into the local economy.

Dana, a Toledo-based corporation, recently reported reaching the billion dollar sales level; this achievement was spurred by its principal division, Spicer Axle, which is located in Fort Wayne. The Axle division shares the transportation outlook problems noted above; however, it is a major supplier of axles for four-wheel drive vehicles, which have bucked industry trends.

The severe price weakness of copper, once in short supply, is a matter of record. This does not portend strength for local primary metals manufacturing, which is predominantly copper based.

Zoning permit requests for single-family dwellings are currently comparable to long-run trends. The August-October average has been 239 requests and current requests total 262. Unless these zoning permit requests are not followed by building permits, Fort Wayne and Allen County residential construction is not suffering as badly as the construction sector nationally. There is considerable evidence that

apartment construction in the Fort Wayne area has been minimal during 1974.

Farm income in the area will again be a source of strength in the coming months. Despite the unfavorable weather of the 1973 growing season, stronger than expected prices due to the inelastic demand for grain crops will give the farming sector favorable returns.

To summarize, the Fort Wayne economy should continue to be able to avoid the relatively severe unemployment generally forecasted for the short run. However, the local economy appears likely to lag behind the national economy in its next upturn. The September-October 7.7 percent decline in new orders for durables cannot be ignored, especially since primary metals and transportation equipment paced the decline.

MUNCIE

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The Muncie economy has shown areas of relative strength during the first three quarters of 1974 as the U.S. economy continues to slip into probably the longest and deepest recession in recent decades. These signs of relative strength may appear contrary to normal expectation, since the Muncie economy has a high concentration of durable goods production. Furthermore, Muncie's industrial employment is heavily dependent upon the very depressed automotive industry.

Manufacturing employment in Muncie during the first three quarters of 1974 was up 4 percent over the comparable 1973 quarters. The transportation equipment sector accounted for the bulk of this increase due to positive

demand for the products of Warner Gear, Muncie Chevrolet, and Delco Battery Operations. However, layoffs are occurring for the local transportation equipment industry during the fourth quarter, and future prospects are not bright because of the grave automotive slump. Employment also declined in the electrical machinery sector of the economy during the first three quarters of 1974; the decline was due in part to the energy crisis.

Retail sales during the first three quarters of 1974 were up more than 12 percent over the same quarters for 1973, as indicated by department store sales. Similar data for the United States recorded an 8 percent increase. The 1974 growth in retailing is also reflected in the fact that retail and service employment increased by 1 percent during the first three quarters of 1974 over the comparable period for 1973. New retail outlets and expansion contributed to this growth.

R. L. Polk & Company reported that unit automobile and truck sales were down 13 percent for the first three-fourths of 1974 over the 1973 period. September 1974 unit sales dropped 25 percent from September 1973, indicating the continuing consumer resistance to purchases of new cars.

Government employment (primarily by Ball State University) has recorded tremendous increases in recent years. These increases have provided for a sizable proportion of the retail and service growth. The university's employment has stabilized with no foreseeable increases.

The positive economic activity in Muncie during the first three quarters of 1974 has facilitated an unemployment rate that is below the state and national averages. Seasonally adjusted, the September 1974 rate for Muncie was 4.6 percent; the state rate was 5.4 percent; and the national rate was 5.8 percent. However, present and forthcoming depressed national economic conditions point toward increased unemployment in Muncie.

INDIANAPOLIS

NANCY RUFF
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As evidenced by the national data on business indicators, inflation has distorted the numbers reflecting business developments in the Indianapolis area. Consequently, to derive an accurate impression of economic behavior in the local area, allowance must be made for the gains that are due altogether to price increases. On balance, the Indianapolis economy continues to experience the recession in business that is beginning to be "officially" recognized as having occurred throughout 1974.

An examination of the components of the Indianapolis Index of Industrial Activity compiled for the Indianapolis area by the Indianapolis National Bank reveals that all of the major local industrial sectors have been affected adversely in 1974. Yet, when approached for an opinion of business development, local plant managers and operators frequently report record volumes of sales and orders. Inflation's effects may be misleading for local managers, but the reports may also suggest that the current business adjustments are not being experienced with the same severity by individual business organizations.

Staying strictly to the facts that reflect local industrial developments, the severity of the current business decline would seem to be greater locally than it is nationally, according to the Federal Reserve Board's Index of Industrial Production and other national indicators. In all but the transportation equipment industry, decreases in indexes of industrial activity for all of the major Indianapolis industries have been greater than those reflected by the national indexes.

For example, electrical machinery and chemical industries have curtailed local operations more drastically than would seem to be true of the same industries elsewhere in the nation.

During the past three quarters of 1974, the local changes reflected adjustments that are several times greater than the 2-4 percent decreases for these industries nationally. Of course, these disproportionate changes have been the results of sharp curtailments by a few local firms that are in these particular classifications, while offsetting changes have had a tempering effect on the national averages. Although the transportation industry has been curtailed significantly on a national basis (down about 7 percent since the end of 1973), the local industry shows a decline of only 2 percent.

Local sustaining influences have been the relatively good performances of the Allison Division of General Motors and the International Harvester Company. Each local plant has enjoyed a favorable order-volume performance for several months.

Employment data for the period beginning with the fourth quarter of 1973 and ending with the third quarter of 1974 yield similar unfavorable comparisons between Indianapolis and the U.S. average. Nationwide, total employment increased by 0.7 percent, manufacturing employment decreased by 1 percent, and unemployment increased by 18 percent. In Indianapolis, total employment went down 1 percent, manufacturing employment dropped by 4 percent, and the unemployment numbers rose by 29 percent.

Local unemployment has been affected by the curtailments in auto manufacturing and other durable goods industries. In the past decade, Indianapolis has experienced a consistently lower unemployment rate than the national average. In the current adjustment, layoffs have been more extensive and widespread throughout the local economy than in past years. Partially as a result of this greater

incidence of layoffs and partially due to statistical modification, the unemployment rate in 1974 is consistently higher than the national average. With the auto, housing, capital goods and probably farm-related industries all experiencing simultaneous curtailments, the greater-than-average unemployment rate may persist in the local economy well into 1975. Yet, encouraging development is reflected in the substantially better-than-average performance for help-wanted advertising in the local metropolitan area. Compared to a 1967 base, local advertising has been maintained at a volume considerably greater than the national average, and the search for workers is more intense locally (relatively) than elsewhere in the nation.

National trends notwithstanding, construction is still a source of strength for the Indianapolis economy. More new housing unit permits were issued in the local area in 1974 than in any previous year. Although the number of new apartment units authorized by permits during the first nine months of 1974 is only about half that of the comparable months of 1973, the number of single-family permits decreased by only 11 percent, which is only one-third the decrease experienced nationwide during the same period. Commercial and industrial construction in terms of value of new permits has kept pace with the 1973 record, with large 1973 projects—the Washington Square shopping center and the downtown area—replaced by the Merchants Plaza project and various new warehousing projects in 1974.

In summary, the Indianapolis economy is undergoing a fairly extensive recession, which is affecting the nation generally. Unlike the experience in the last two recessions, the effect of the current adjustment would seem to be greater locally than appears to have occurred on average elsewhere. Perhaps there is some satisfaction in knowing that, as revealed by recent data of family budget costs and special cost-of-living indicators, inflation's impact on the local economy has been less than that on many other metropolitan areas.

SOUTH BEND-ELKHART

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The South Bend-Elkhart area, like the state and nation, is currently experiencing increased unemployment rates. The levels and rates of change differ by locale and in comparison to the state and nation. Local unemployment hovered just over the 4 percent mark throughout the summer months while the state's was 6 percent and the nation's just over 5. Nationally, seasonally adjusted unemployment advanced to 6.0 percent in October from the August level of 5.4.

The latest information available for South Bend-Elkhart is for September, when the rate rose to 4.5 from the summer average of 4.2 percent. The impact of the automotive industry's dangerously slackened national demand was felt at the Bendix Corporation's brake and steering division; an initial 200 employees are to be laid off or face early retirement within the closing weeks of this year. Further layoffs are anticipated as a result of secondary effects and as more automotive-oriented production is affected.

The South Bend economy apart from Elkhart's has no sectors of industry or commerce that appear to be in imminent danger of developing severe unemployment in the next three months, although within that time a rate between 5.0-5.5 percent is probable as the nation moves towards the 6.5 level. Within six months' time, if the nation approaches the 7.5-8.0 percent range (a strong probability with the present national policy configuration), South Bend unemployment is likely to move to the 6.2-6.7 percent range. This assumes

that the unemployment behavior of the local industrial structure is consistent with that over the last two to three years as compared to the nation's performance.

The structure of Elkhart's employment and industry is radically different from that of South Bend. In Elkhart, nearly 40 percent of the employment is in recreational vehicle and mobile home activity or allied to it. These areas, along with construction and rubber and plastics, have been particularly hard-hit by poor demand, high costs, and high interest rates, both to the consumer and producer. During the past summer when the gasoline crisis appeared to be easing and prices and supplies appeared to be regaining some stability, Elkhart experienced a minor surge in production and employment. Industrial electricity sales moved up 38 percent from April to July and then fell about 3 percent for the next month, the latest month for which data are available.

In early November, it appeared that Elkhart unemployment was over 5 percent and swiftly moving on up to higher levels. Unemployment claims of the past two months have reflected record expansion. The commercial as well as the manufacturing base is becoming involved now in the classic manner of the multiplier effects coming out of the primary unemployment's damage. By the end of the year, the area may be above the critical 6 percent level of unemployment, defining it as a depressed area.

Because contracting demand in the economy is so heavily centered in durable goods and construction, Elkhart's situation will be similar to the depression that developed immediately after the oil crisis early in the year. Only a dramatic improvement in the national economic scene, which hardly seems likely, can bring about immediate benefit within a quarter's time. Elkhart's unemployment may well be into two-digit rates. The area is quickly becoming one of the state's most serious pockets of depressed economic activity.

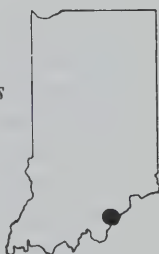
About one-quarter of the manufacturing production in the South Bend-Elkhart area is sent throughout the nation or is exported

abroad. Therefore, the area depends heavily on national performance. This dependence is perhaps not as great as Detroit's or Gary's, but certainly similar national factors will influence the South Bend-Elkhart production base. Within this combined local area, the Elkhart difficulty may spread to South Bend since a significant number of the employed labor force resides in South Bend but works in Elkhart and other outside areas. The South Bend retail base may be affected within the month, even though the export-related manufacturing base may survive severe national impact. National policies particularly directed towards alleviating automotive problems and stimulating construction would have helpful consequences for the next six months for this area of Indiana.

SOUTHEASTERN AREA

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The economic picture in the Louisville metropolitan area, including southeastern Indiana, reflects the current assortment of national economic problems—tight money, a slump in residential construction, and a cyclical decline in production. However, the local economy appears generally to be a little stronger than the national economy, with most sectors evidencing stagnation, rather than a decline, during the first three quarters of the year.

In September of last year, the estimated nonagricultural payroll employment for the Louisville SMSA (Clark and Floyd Counties in Indiana and Jefferson, Oldham, and Bullitt Counties in Kentucky) reached a record high of 369,600 workers. During the ensuing twelve months, employment remained at or below that figure, except for modest seasonal gains in

December, June, and July. The September 1974 total was only 369,200—400 workers less than the year before. While the absolute decline was small, the extent of the slow-down can be better appreciated by a comparison with the preceding twelve-month period, which registered an employment gain of over 14,000 workers.

The growth of the labor force during the past year was entirely absorbed by rising unemployment, which increased from a low of 2.2 percent of the labor force during the first quarter of 1973 to about 3.7 percent during the first five months of 1974, and then to well over 4 percent for the remainder of the period. After declining to 4.1 percent in September, unemployment leaped to 6.5 percent of the labor force in October. Happily, this last figure was a fluke; the data for the October unemployment rate were gathered at the time of a one-week temporary lay-off of 11,000 GE workers. Without that extensive furlough, the unemployment rate would have been about 5.5 percent. Unhappily, another 2,500 GE workers were permanently laid off at that time, and additional lay-offs are expected there and elsewhere during the next several weeks. Consequently, the unemployment rate is likely to remain fairly high through at least the first quarter of 1975.

Contrary to past experience, the Indianapolis portion of the SMSA had a better employment record this year than did the metropolitan area as a whole. From September 1973 to September 1974 nonagricultural employment in Clark and Floyd County firms increased by 1,100 workers—a 2.7 percent gain—and the August employment total for nonmanufacturing was the highest of any month on record. The unemployment rate for residents of the two Indiana counties remained above 4 percent throughout 1974, and in three of the months was over 5 percent, but there was no significant upward trend for this rate. In July the area-wide unemployment rate rose above the Clark and Floyd rate for the first time in many years, and

Index of Louisville Area Business Activity 1967 = 100, seasonally adjusted)

	Sept. 1973	Jan. 1974	June 1974	Sept. 1974
Industrial pro- duction	126.1	129.5	119.7	121.7
Trade & services	123.6	124.5	124.1	124.0
Construction	140.2	150.6	135.3	135.9
Transportation	144.1	152.5	149.3	150.5
Financial	195.9	229.2	229.9	263.3
Employment	121.1	122.1	121.4	121.1
Composite index	134.3	140.5	135.8	139.9

SOURCE: Research Department, Louisville Area Chamber of Commerce.

Since then it has fallen significantly below the Clark-Floyd rate only during September.

The business activity indexes in the accompanying table indicate the stagnant conditions prevalent in most sectors of the local economy. Except for the financial sector, each index is constructed in whole or in large part from real, rather than monetary, data—for example, railroad carloadings or kilowatt hours used in manufacturing—and all are seasonally adjusted. Most of the indexes fluctuated within the range shown in the table, reaching modest peaks in January and July-August, dipping to low points in March and June, and ending the twelve-month period at levels very close to where they began. However, preliminary figures for October indicate a decided downturn in nearly all sectors.

The financial index, based on commercial bank debits and loans, alone registered strong gains over the year, reflecting the expansion of both the money supply and the demand for borrowed funds. While bank debits as a whole went up, several banks reported declines in demand deposits over the year. Savings and loan associations appear to have recovered somewhat from the third quarter savings drain. All banks report tight money conditions, with strong loan demands and some credit screening. Despite the rising unemployment, delinquency ratios appear to be holding steady, but there has been some increase in late payments.

As in the rest of the nation, tight money and high interest rates contributed to a slump in residential housing construction. This in turn led to reduced sales and employment in related industries, such as the major household appliances produced in Louisville and the kitchen cabinets and wood furniture produced by several Floyd and Clark County manufacturers. Both of these industries are likely to experience further reductions in demand if the national recession deepens.

On a brighter note, commercial construction should pick up considerably in 1975. Several major projects have already been announced, including a \$16.5 million powder plant in Clark County, a number of new plants in New Albany's industrial park, and a large convention center and sewage treatment facility in Louisville.

Despite this expected improvement in construction, however, it appears likely that for at least the next six months output and employment in the Louisville area will be declining. While rising prices may continue to push retail sales higher in value, sales will decline in volume. Unemployment will increase but will probably remain below the national rate.

EVANSVILLE

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According to the latest statistics, the deepening recession that is stalking the country has not yet appeared in the Evansville area. Only residential construction and automobile sales show appreciable declines, but in both categories the declines are somewhat less pronounced than the national trends.

Total area bank deposits in October are up

over 8 percent compared with October of 1973, while bank debits have increased almost 17 percent in the same period. In the savings and loan institutions, savings are up over 5 percent on a year-to-date basis, reflecting little disintermediation. However, there has been some shifting from passbook savings into certificates of deposit during this period.

In the area of residential construction, single-family building permits have declined about 25 percent in year-to-date comparisons. The continued flow of savings in the area, however, have moved some lenders to hint that mortgage money will be available in adequate amounts in the spring.

The area unemployment figure stood at 3.7 percent in September but dropped to 3.5 percent in October. Although layoffs have occurred in manufacturing employment, these have almost been offset by added employment in retail, wholesale, services, and miscellaneous nonmanufacturing categories. If the national recession continues and the demand for Evansville's furniture and appliances is reduced, we may yet see additional layoffs in these industries that may not be offset by growth in nonmanufacturing employment. Present statistics, however, do not yet reflect this problem.

Optimism prevails in the areas of coal production and agriculture. As the nation depends more heavily on soft coal and as Environmental Protection Agency standards are relaxed, the Evansville area expects a substantial economic boom from both open-pit and deep-shaft coal operations. In the agricultural area, farmers look forward to increased plantings and harvestings of feed grains and soybeans which will apparently be marketed at increasing prices.

The economic base of the Evansville region does not yield the regional growth rates noted historically for the nation or the state as a whole. Similarly, in the case of an economic decline, the base does not immediately reflect rates of decline that can be seen in national or state trends.

GARY-HAMMOND-EAST CHICAGO (Calumet Area)

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In my last "outlook" for the Gary-Hammond-East Chicago area, I suggested the possibility that the local index of business activity would dip below the three-year secular trend. This did occur with a net loss of about 1,900 jobs in manufacturing, 1,600 in nonmanufacturing, and 2,600 in government.

Our department's models indicate a continued downturn unlike the two postwar troughs when the local index averaged over 100 points below the national trend. This time we expect our local index to benefit from some countercyclical activity initiated by Inland Steel and other area firms.

LaSalle Steel will locate a small plant at Griffith; Ashland Chemicals will expand its Hammond facilities; and Amoco will add an aromatic recovery unit in Whiting. Product capacity will be added by Queen Anne Cannery; the Borg Warner plant will reopen under the ownership of Anderson of Michigan; and Youngstown Steel will build a \$90 million cell battery (expanding capacity by 27,000 tons and employing about 100 employees). Many more investment plans are in the making by smaller firms in both manufacturing and construction.

Economists often note that "expectations" factors play a significant role in consumer behavior. In other words, if most consumers in a region have formed a specific opinion concerning the duration of a recession or inflation, they tend to formulate their spending plans accordingly. Of course, consumers' plans may be altered, and deviations between actual and

pected spending (overestimating in slow-downs and underestimating in recoveries) average about 18 percent, according to previous studies.

We conducted a survey of consumer and business opinions by using a stratified random sample of 189 households and a panel sample of sixty-eight businesses in Lake and Porter counties. We find that there is some pessimism in households. Over 24 percent of them stated that they expected the current business slowdown to last over eighteen months. Over 11 percent expected two-digit inflation to continue in 1975. Businesses were more optimistic; about 5 percent estimated that the recession would last over eighteen months. Almost 20 percent thought that two-digit inflation would continue in 1975. (The means are 12.23 months for the duration of the recession and a 7.8 percent increase in prices.)

A special battery of questions was employed to ascertain whether respondents felt that there was a trade-off between reductions in the rate of inflation and the duration of the business slowdown and, if so, what the quantitative parameters of the trade-off were. Our statistical analyses support the view that both households and firms clearly recognize such a trade-off. In the opinion of most, the trade-off is likely to be costly; respondents project a business slowdown lasting over eighteen months before the inflationary rate decreases to a 4 percent annual rate from the present 11 percent rate. Those who expect a short recession—about three months—expect prices to start climbing again at annual rates in excess of 12 percent.

We find that about 9 percent of the households plan to purchase appliances; 26 percent will buy automobiles; 41 percent plan to purchase furniture or fixtures; and 24 percent plan to buy television sets or other electronic equipment.

In comparison with similar previous soundings of intended purchases, there is a slight reduction of planned purchases—yet overall demand remains robust. Consumer nondurables did not fare quite so well; 24 percent of those

surveyed intend to cut down on men's clothing; 26 percent intend to reduce purchases of ladies' fashion goods; 29 percent will decrease children's apparel purchases; 17 percent will buy fewer meats; 9 percent will buy fewer fresh fruits and vegetables; 28 percent intend to curtail entertainment; and 34 percent will cut down on travel and recreation.

During the past six months, the nonbusiness sector of the SMSA appears to have done slightly better than the business sector; 43 percent of the population reported higher incomes, while only 23 percent of the businessmen reported an increase in their personal incomes or profits. Nineteen percent of the businessmen reported declines in personal incomes as compared to 12 percent for the population.

We find that real incomes would have to decline over 4 percent before a significant reduction in consumer durables purchases occurs. Moreover, should incomes keep falling beyond the 4 percent level, our statistical models indicate an average reduction of about 2 percent for each 1 percent reduction in income. We also note that a reduction of less than 1 percent may occur for each 2 percent rise in the local price level of nondurable goods.

What are we to make of these projections? The average anticipations appear to be realistic, based on what we know of the economy. I would agree that there will be a twelve-month slowdown before the upward climb begins. I also expect the local price level to rise at an annual rate of 7-8 percent and real incomes to fall about 2-3 percent.

I expect the automobile replacement cycle—the time required for an old car to be replaced by a new one—to be lengthened from the current 3.85 years to about 4.45 years. This still means that over 29,000 new and used cars are likely to be purchased by the SMSA population in 1975.

Our business panel reports that sales fell for 23 percent of respondents and increased for 15.4 percent. Department stores and discount stores tended to gain at the expense of smaller

stores and specialty stores. The smaller shopping centers in the urban areas tended to lose out to the large suburban shopping centers located (both in Indiana and in Illinois) where prices were generally softer. I expect these trends to continue and to be even more pronounced in 1975. A survey of businessmen reports the following intended price increases: 25.8 percent intend to raise prices by 2-4 percent; 43.9 percent, by 5-8 percent; 17.1 percent, by 9-12 percent; and 12.2 percent, by at least 13 percent (1 percent plan no price increase).

TERRE HAUTE

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The economic picture for the Terre Haute area is mixed. Unemployment is rising at a time that is normally a peak employment period, and the situation may be worsened by the coal miners' strike. In addition, the Indiana-Michigan power plant has been postponed for at least two years, which is a major setback for the area. On the positive side, however, several new projects are developing that should provide long-term benefits.

Unemployment in the Terre Haute area in September was 3.6 percent, less than both the state level (5.03) and the national level (5.7). Seasonally adjusted, the Terre Haute figure was 4.6 percent; the state, 5.4; and the national, 5.8. Although Terre Haute adjusted unemployment is less than the U.S. and Indiana levels, it changes more in proportion to these figures. The October unemployment figure was 3.8 percent, seasonally adjusted to 5.3 percent; 1,000 fewer people were employed in the Terre Haute area in October.

Plant layoffs are largely responsible for these figures. Stran Steel, Anaconda, and General Housewares are among the firms laying off workers. The DuPont plant in Vermillion County is shutting down its defense-related operations, and by February of 1975 the work force will have been cut from 598 to 235. A series of labor disputes has also raised the unemployment figure, and an additional 1,000 may be affected by the coal strike.

Indiana-Michigan power plant officials have been notified that they will not be able to utilize Indiana coal as they had planned, and this factor may have influenced their decision to delay the construction of the Breed plant at Sullivan. The two to three year postponement was also the result of the price squeeze and inflation.

However, the unemployment rate in the area is still lower than that of the state as a whole, and the area is still attracting new developments. The Chamber of Commerce has stated that more companies than ever before are investigating the possibility of locating in Terre Haute. The city has been authorized to construct forty-one low income family type houses, which will have a total value of \$1,500,000. The Downtown Terre Haute Beautification Program—which will provide sidewalks and curbs where needed, islands of greenery, and weather shelters—will go into effect by spring. The program is financed by both federal and private funds.

A new shopping center is to be constructed on ten acres on the outskirts of Brazil in Vigo County. It will consist of a department store, supermarket, and eight other businesses. There will also be a new shopping development in downtown Brazil. And a \$600,000 project including extensive remodeling and sixty new comprehensive care units, is planned for the Vigo County Home.

Historically, the Terre Haute overall economic scene has been less rosy than the state and national, but recently it has looked better than they. It seems likely that it will continue to improve despite the current labor situation.

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JANUARY-FEBRUARY 1975

Indiana Business Review

Indiana Domestic State Product—an Update <i>Henry Fishkind</i>	1
Money Management in the Local Public Sector <i>William M. Petrovic</i>	4
Crime and Property Values <i>Leslie P. Singer</i>	7
CAGIT Adoption—A Case Study <i>George W. M. Bullion</i>	10
An Econometric Forecast for 1975 <i>Henry Bartel, Al Field, and Peter Wrage</i>	15



Indiana Business Review

VOLUME L

JANUARY-FEBRUARY 1975

Indiana Domestic State Product—an Update

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This article updates and corrects my previous estimates of Indiana's gross domestic state product (GDSP) ["Indiana's Gross Domestic State Product, 1954-72," *Indiana Business Review* (July-August, 1974), pp. 1-6]. Since those estimates appeared, I discovered an error in my calculation of the contribution to GDSP from other industries." More important, however, is the recent revision by the U.S. Department of Commerce of the state personal income data which are the basis for my GDSP estimates. Utilizing the most up-to-date data, Table 1 contains revised estimates for Indiana's GDSP for the period 1958-73 by industrial sector. These estimates were calculated by the Kendrick-Jaycox technique, which was described in the July-August article.*

The revised GDSP estimates in Table 1

differ significantly in three areas from the earlier estimates. *First*, the revised estimates for the government and other sectors are about 15 percent below the previous estimates. *Second*, the revised farm estimates are almost 50 percent larger due to substantial revisions in the Agriculture Department's farm income estimates, which are the basis for the gross farm product tabulations. *Third*, the new data break down the manufacturing sector into durable and nondurable goods categories. This is of particular interest in Indiana because of the importance of durable goods manufacturing to the state's economy (durable goods manufactures accounted for over 30 percent of Indiana GDSP in the 1958-73 period). In addition, the contribution of durable manufacturing to GDSP behaves quite differently from non-durable manufacturing.

Table 2 expresses Indiana's GDSP as a percentage of gross national product (GNP). Looking across any row of the table we find the percentage contribution of Indiana's industries

*Similar estimates for Indiana have been prepared by Esen Gurtrunca for the Indiana Department of Commerce. I have benefited from discussions with Dr. Richard L. Pfister and Ms. Gurtrunca, but I am solely responsible for any residual errors.

TABLE 1

Indiana's Gross Domestic State Product, 1958-73 (in millions of current dollars)

Year	Farm	Mining	Contract Con- struction	Durable Manufac- turing	Non- durable Manufac- turing	Trade	Finance, Insurance, Real Estate	Transpor- tation, Communi- cations, Utilities	Services	Govern- ment	Other (Forestry, Fisheries, and Misc.)	Total
1958	674.1	111.2	552.9	3,190.8	1,344.2	1,865.2	1,145.9	959.8	888.1	738.0	14	11,484.3
1959	599.1	125.7	534.9	3,834.8	1,473.6	2,020.6	1,243.8	1,031.0	957.0	792.1	14	12,626.5
1960	662.9	128.9	579.9	3,880.0	1,516.0	2,048.1	1,333.0	1,083.9	1,035.7	858.0	14	13,140.5
1961	699.3	130.8	549.5	3,766.4	1,540.5	2,081.4	1,387.3	1,090.3	1,078.0	929.0	14	13,266.4
1962	698.3	132.5	552.9	4,375.0	1,655.3	2,239.0	1,464.7	1,154.5	1,142.7	983.2	16	14,413.9
1963	730.0	139.4	600.2	4,652.2	1,723.0	2,274.4	1,638.2	1,234.7	1,130.0	1,045.0	16	15,183.1
1964	576.5	137.5	750.0	5,064.3	1,829.7	2,418.7	1,764.2	1,312.1	1,216.1	1,152.0	0	16,221.3
1965	853.0	125.6	858.5	5,817.4	1,965.7	2,632.0	1,880.9	1,430.0	1,331.6	1,258.0	0	18,153.7
1966	851.4	126.3	945.2	6,384.7	2,120.1	2,874.0	2,047.6	1,535.6	1,475.4	1,428.0	0	19,788.3
1967	873.7	126.7	1,017.1	6,336.1	2,145.4	3,045.1	2,204.5	1,577.6	1,599.7	1,568.2	0	20,493.9
1968	826.2	135.8	1,073.4	7,036.5	2,320.2	3,309.4	2,358.2	1,701.6	1,773.3	1,729.1	0	22,263.6
1969	1,025.8	135.9	1,242.3	7,382.0	2,433.4	3,451.5	2,542.0	1,813.5	1,947.4	1,802.0	25	23,800.7
1970	833.2	144.2	1,196.0	7,010.9	2,520.6	3,762.0	2,695.0	1,903.0	1,083.2	1,949.3	24	24,121.3
1971	1,095.0	135.0	1,223.5	7,525.6	2,659.9	4,054.1	2,971.9	2,102.5	2,230.5	2,137.1	27	26,162.1
1972	996.6	157.3	1,353.5	8,738.5	2,832.3	4,333.4	3,184.4	2,295.1	2,429.4	2,326.0	29	28,675.4
1973	2,092.0	176.0	1,470.3	10,222.5	3,072.2	4,855.8	3,506.0	2,509.1	2,719.8	2,505.1	33	33,161.7

TABLE 2

Gross Domestic State Product as a Percentage of Gross National Product by Industrial Sector

Year	Farm	Mining	Contract Con- struction	Durable Manufac- turing	Non- durable Manufac- turing	Trade	Finance, Insurance, Real Estate	Transpor- tation, Communi- cations, Utilities	Services	Total
1958	3.24	0.90	2.67	4.59	2.49	2.48	1.62	2.82	2.07	2.57
1959	3.06	1.03	2.40	4.72	2.46	2.46	1.62	2.86	2.05	2.61
1960	3.23	1.01	2.55	4.70	2.45	2.43	1.61	2.92	2.08	2.61
1961	3.35	1.01	2.35	4.64	2.45	2.39	1.52	2.95	2.04	2.55
1962	3.29	1.02	2.22	4.76	2.47	2.42	1.52	2.92	2.01	2.57
1963	3.40	1.06	2.27	4.78	2.48	2.34	1.53	3.10	1.86	2.57
1964	2.83	1.03	2.61	4.81	2.46	2.31	1.52	3.13	1.84	2.57
1965	3.58	0.93	2.72	4.93	2.45	2.35	1.53	3.11	1.85	2.67
1966	3.42	0.90	2.72	4.90	2.42	2.35	1.52	3.16	1.86	2.64
1967	3.58	0.93	2.82	4.75	2.37	2.34	1.46	3.25	1.84	2.58
1968	3.30	0.96	2.72	4.82	2.36	2.33	1.45	3.20	1.86	2.57
1969	3.68	0.89	2.80	4.83	2.37	2.21	1.41	3.21	1.85	2.56
1970	2.87	0.85	2.57	4.81	2.26	2.26	1.38	3.22	1.83	2.47
1971	3.54	0.83	2.42	4.96	2.38	2.23	1.39	3.24	1.83	2.48
1972	2.82	0.89	2.43	5.10	2.34	2.18	1.40	3.13	1.82	2.48
1973	3.70	0.90	2.38	5.21	2.37	2.22	1.40	3.15	1.83	2.56

o GNP. For example, over 5 percent of the durable goods manufacturing in the United States has taken place in Indiana in recent years. The farm sector and the transportation-communications-utilities sector are also important contributors to GNP, accounting for over 3 percent of the gross output for their sectors in the sixteen-year period.

By looking down any column of Table 2, we can compare the development of each of Indiana's industrial sectors to their national

counterparts. For example, during the 1958-73 period Indiana accounted for about 2.5 percent of GNP. The trade, finance-insurance, real estate, nondurable manufacturing, and service sectors have accounted for a declining share of their national sectors' contributions to GNP. The farm, mining, and construction sectors' shares of GNP have varied somewhat around their sixteen-year averages. Finally, the transportation-communications-utilities sector and the durable manufacturing sector have shown

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VOLUME L

JANUARY-FEBRUARY 1975

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strength over the period. They have grown in importance, accounting for an ever increasing share of their sectors' contributions to GNP.

The sensitivity of Indiana's economy to the business cycle is a particularly interesting and relevant phenomenon. Indiana's GDSP grew at a 4.36 percent average annual rate during the 1958-73 period. However, during the 1960-61 and 1969-70 recessions, GDSP grew at rates of 0.95 percent and 1.33 percent, respectively. Moreover, this decline in the growth of Indiana's GDSP was substantially larger than the decline in the growth of U.S. GNP for these recessions. This greater sensitivity of Indiana's economy to national business cycles is mainly due to the behavior of Indiana's large durable manufacturing sector. In Indiana, durable manufacturing accounted for over 30 percent of GDSP; only about 15 percent of GNP was derived from this sector.

While Indiana has maintained a growing share of this country's durable goods manufacturing (see Table 2), the output level of durable manufacturers was quite sensitive to the business cycle. Table 1 shows that the gross product of durable manufacturing fell in both the 1960-61 and the 1969-70 recessions. For the 1960-61 recession, the rate of decline was 9.9 percent, and the rate of decline for the 1969-70 recession totaled 5.2 percent.

It is interesting to note that nondurable manufacturing contributes approximately 10 percent of the GDSP, and this share is much more stable over the business cycle than durable manufacturing's share. Thus, it is important to disaggregate durable and nondurable manufacturing because their cyclical sensitivities are so different. The annual data used here actually hide even greater fluctuations that quarterly or monthly data would reveal.

Money Management in the Local Public Sector

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Money is always a valuable and scarce commodity in any economy. Interest rates measure the price borrowers are willing to pay for money to be repaid in the future; consequently, rates rise and fall depending on the supply of and demand for money. In an economy experiencing monetary restraint, interest rates tend to rise because the monetary authorities limit the supply of money. During these times, the cost of mismanagement of money rises with the interest rates.

In private firms, tight money has often forced owners to relinquish some of their equity to lenders, and high interest payments

have also caused the profits in cash-shy firms to be seriously eroded. In the public sector, money management is equally important. Although poor management of public funds will not result in equity or profit losses, it will lead to a loss of revenue. This, in turn, will result in a loss of services or increased tax rates.

The degree of this revenue loss is more severe than one might expect. For example, in Indiana, city controllers can earn as much as \$10 per resident per year; the county and state treasurers together can add another \$10 to \$15 of revenue per capita per year by simply investing temporarily idle funds in low-risk

money market instruments. Thus, in a county the size of Monroe, officials could earn \$2 million in one year for the taxpayers.

The investment of idle funds in the public sector is a relatively new phenomenon and, in many cases, has resulted from financial crises at the local level of government which are caused, in part, by rampant inflation. Rapid inflation has forced governmental units to conduct extensive searches for additional sources of revenue.

In general, traditional revenue sources are not adequate to provide the resources needed by local governments to keep up with inflation. Municipal units have a difficult time raising the revenues needed to cover cost increases because of the limited and somewhat inflexible revenue sources available to them. A bulk of the revenue is received from property tax collections. Revenue from this source is quite stable and lags behind price increases during inflationary periods. Once the annual property tax rates are set, municipal governments must make do with the revenue they receive, no matter how fast prices rise.

Local participation in sales tax revenue can, in the balance, help to offset inflation somewhat. Taxes levied on the dollar amount of sales will increase as the price of products increases. Other taxes, however, that are placed on unit amounts, such as a tax on liquor or gasoline by the gallon, may actually be hurt during inflationary periods. As the price of gasoline goes up, gas stations may have a higher dollar volume of sales but may actually be selling fewer gallons of gas.

THE LOCAL PROBLEM

Clearly, inflation presents a serious problem to local governments—especially inflation that has not been adequately allowed for in the budget. If a local governmental unit wants to avoid running a deficit as inflation spirals, it has to cut costs wherever possible, rely on those tax

revenues that increase with inflation, and better manage its money.

In most cases, the amount of revenue available from a simple program of investing temporarily idle funds far exceeds the additional revenue that increased charges, fines, and fees might generate. In fact, if the voting public is fully informed about the amounts of revenue yielded by the investment of idle funds, considerable public support can be generated for a quality investment program. This program would provide additional revenue to local governments and, at the same time, remove the pressure on fees and taxes.

Historically, inflation and interest rates have moved in the same direction so that during inflationary periods the justification for investing idle funds is twofold—the need for revenues and the high cost of not investing. If investments are made in high-yielding certificates of deposit, government securities, and repurchase agreements, the erosion of purchasing power can be significantly reduced.

PROCEDURES AND CHOICES

The procedures for setting up an investment program involve preparing a cash flow and determining where the money will be invested. A cash flow is a forecast of future cash expenditures and receipts, and can cover a period of anywhere from one week to three months. By subtracting the projected expenditures from the total of the expected receipts and the current balance, a municipality can determine what funds will not be needed on a temporary basis.

Idle funds can be invested in a number of money market instruments, all offering favorable returns during inflationary periods. Currently, the most popular investment vehicle is the large certificate of deposit. These certificates are sold in amounts of \$100,000 or more and run for over twenty-nine days. All banks can legally issue them, and the rates of return

exceed the rates available from any of the federal debt issues such as Treasury bills. There is no regulation of the rates that can be paid on these deposits. One attractive feature of the certificate of deposit is that the money remains with the local banks, which are likely to lend some of these funds to businesses in the immediate area.

Treasury bills are also very popular because they can be purchased for as little as \$10,000 for periods of anywhere between one day and a year and can be sold before maturity without loss of interest. The return on Treasury bills has been ranging between 6 percent and 10 percent. Treasury bills are available through all banks, but the funds in Treasury bills do not actually remain with the bank since the bank serves only as a broker.

Although this revenue source has always been available, state and local governments in some states have taken much greater advantage of it than other states. In California, a very progressive state, over 90 percent of the state and local money is in interest-earning bank accounts, according to statistics compiled by the Federal Deposit Insurance Corporation. Governments at the state and local level in Ohio, Michigan, and Illinois are between 70 percent and 80 percent invested. That means that for every dollar in the hands of state and local governments, 70¢ to 80¢ is earning interest while the remainder is lying idle in checking accounts. On the other hand, governments in the District of Columbia, New Hampshire, Indiana, South Carolina, and West Virginia are less than 50 percent invested. These five states clearly have a large untapped source of revenue.

THE INDIANA SITUATION

In the case of Indiana, an additional \$70 million could be earned at the present level of interest if local officials were performing as well as their counterparts in California. To raise this

same amount of revenue through taxation would require every Indiana citizen to pay about \$12 more per year than he is now paying in taxes. Revenue benefits would accrue entirely at the local level because the state government in Indiana is currently over 90 percent invested.

A closer look at the Indiana situation reveals that some communities have almost no room for improvement, whereas others do not investing whatsoever. Essentially, different levels of interest earnings result from the level of funds available for investment. In local government, this is primarily a function of the property taxes. However, it is difficult to estimate the amount of revenue available in any particular area because there are so many overlapping jurisdictions. Investment is needed in the hospital, school, and utility systems as well as in city and county governments.

On the positive side, those cities and counties that have invested monies that were temporarily idle report interest earnings as high as \$1 per capita per year. One county treasury earned over \$40,000 in one month by simply investing the property tax collections as they were paid. On the other hand, records in the State Treasurer's office reveal many cities, counties, hospitals, and utility systems keep millions of dollars in noninterest earning checking accounts. The investment of these funds would help ease the burden of higher prices not only for the municipalities but also for the taxpayers who will eventually have to pay the price of keeping funds idle.

Because inflation is creating serious problems for local governments, additional sources of funds are desperately needed. Traditional sources of revenues cannot keep up with price increases, and all too often inflation is not adequately accounted for in the budget. Fortunately, the investment of idle funds can go a long way in helping to maintain the purchasing power of public money. Interest revenue from these investments can provide an exceptionally large windfall in states where levels of investment are now low.

Crime and Property Values

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Crime, race, and urban blight are closely associated in the mind of the public. Yet it is difficult to assess the relative weight or the role of each in the total process of urban deterioration.

The study described in this article focused on crime and race as separate phenomena. The impact of each was analyzed as well as that of other economic determinants in nineteen Indiana cities of different sizes and with varying proportions of nonwhites and varying crime rates. The results may offer a clearer view of at least some aspects of the so-called urban problem.

A study of this nature has many policy implications. If the major cause of falling property values is race regardless of the level of crime, there is not much we can do to alter the situation. On the other hand, if the major impact is made by crime, then control of crime may turn the tide of deterioration. Moreover, even if the causes are complex and interrelated, there still is a greater chance of success if the relative impact of crime, race held constant, is greater than the impact of race regardless of the incidence of crime.

AUTHOR'S NOTE—The author wishes to express his appreciation to Miss Mary Ann Knesevich, his research assistant who participated in much of the empirical work.

METHOD OF STUDY

Separating the effects of crime and race is not easy; crime tends to be correlated with race as well as with income, education, and other variables. Fortunately, sophisticated analytic techniques are now available to study this problem; here we shall provide only an intuitive explanation of the results (a technical supplement is available on request to the *IBR* editor).

A sample of nineteen Indiana cities was chosen with populations in excess of 25,000 in both 1960 and 1970. The cities selected were Anderson, Bloomington, East Chicago, Elkhart, Evansville, Fort Wayne, Gary, Hammond, Indianapolis, Kokomo, Lafayette, Marion, Michigan City, Mishawaka, Muncie, New Albany, Richmond, South Bend, and Terre Haute. Additional data were obtained from the 1970 and 1960 *Indiana Census of Housing*; pollution data were obtained from "Environmental Quality Control Reports," Environmental Protection Agency, Indianapolis.

The method of study chosen is known as cross-section analysis. It was reasoned that if crime is significantly associated with falling property values, we would expect property values from 1960 to 1970 to fall in cities where crime rates advanced. An opposite effect would be expected in cities where crime rates fell

during the same period. Similarly, if a decline in property values is associated primarily with neighborhoods with growing minority populations, we would expect proportionately larger declines in property values in cities with such neighborhoods than in cities with small or no changes of this nature.

RESULTS OF ANALYSIS

Our first premise is that demand for housing depends on income, residential density or crowding, and education. We would expect demand and thus property values to rise as income rises and as crowding puts more pressure on the supply of housing. Education is a significant taste variable. In a study of the demand for housing in Indiana cities we found that, holding income and age constant, the proportion of income spent on housing was positively correlated with the sum of years of schooling of both spouses. We found that the specification of the demand for housing was statistically significant, that is, our equations predict rising property values as a consequence of an increase in incomes, crowding, and years in school.

Having taken into account the economic variables which determine the demand for housing and, consequently, given the supply of houses and the average price, we investigated the effect of these variables in an environment where crime rates were changing. In other words, we measured the interaction among economic variables such as income, education, population density, and various types of crime, such as burglary, robbery, and rape. In addition, we separately measure the impact of race. Because crime and race change the socioeconomic environment in which the ordinary market forces of supply and demand operate, one may classify crime and race as environmental variables.

Our results strongly confirm the hypothesis that—holding the effect of income, population density, and education constant—property

values fall when crime indicators rise. An increase in the incidence of crime will cause a gradual outflow of the resident population. This in turn results in an excess supply of housing which, in equilibrium, causes real estate values to fall. A secondary effect of the rising crime rate and population outflow is a reduction in the supply of new housing as well as inadequate maintenance and remodeling. Persons whose incomes allow them to purchase more expensive new homes and who can meet the financial requirements of mortgage companies and the F.H.A. move away from the neighborhood, thus depressing the demand for both new and old housing.

From a statistical point of view, the most significant crime indicator explaining falling property values is the rate of increase in the incidence of burglary. Increases in rape cases and robberies also cause substantial declines in property values; however, our statistical analyses indicate that the impact of these types of crime is less stable and more difficult to quantify than the impact of burglary.

To further test this hypothesis, we performed a comparative analysis by replacing the crime variables with a race variable without changing the economic variables. It is noteworthy that race has less statistical significance than crime. In other words, an increase in the proportion of blacks in urban neighborhoods tends to reduce property values less than would a comparable percentage increase in crime. Moreover, the impact on property values of racial changes appears to be less stable and more difficult to predict than the impact of crime.

We note that—at least for Indiana cities—there appears to be an insignificant statistical association between race and crime, race and low incomes, race and crowding, and so on. This does not imply that there is no association at all between race and other variables. In fact, our analysis indicates that a rising proportion of blacks is related to a rise in burglary, rape, robbery, and auto theft, and increasing numbers of welfare recipients. A rising proportion

of blacks is also associated with a declining number of new homes built and with a reduction in levels of schooling. However, except for the welfare variable, the correlation is not statistically significant. In sum, the present study fails to confirm the hypothesis that race is the most significant variable affecting crime or does it indicate that race is the principal cause of falling property values in urban neighborhoods.

These findings are of particular relevance for incremental (marginal) changes. In other words, cities with high proportions of blacks do tend to have more crime and, consequently, larger decreases in property values than cities with small black populations. But if one focuses on changes in property values as a consequence of changes in criminal activity from 1960 to 1970, as well as on similar incremental changes in the proportion of minority populations, the association between crime and race becomes increasingly tenuous. Thus, while the impact of crime on urban deterioration (as measured by declining property values) is substantial, there is reason to believe that the total impact of so-called black crime and the associated decline in urban property values is likely to be less significant in the future.

These findings were further tested by statistical methods which take into account the simultaneous impact of a number of socioeconomic variables on property values. We have already established the tendency of higher crime rates, rising proportions of minorities, low incomes, low schooling, and so on to cause property values to deteriorate. We also know that incomes tend to be determined by education, employment, and other variables. The supply of new homes depends on income, on the price movements of existing houses, on employment, and so on. In other words, we may ask which of the numerous contributing factors are statistically most significant, after all the interrelationships have been accounted for.

The analysis suggests that if we compare the impact of burglary on declining property values with the effects of income, education, pollu-

tion, and race, burglary is clearly the most significant negative factor. This particular crime is statistically more important than the effect of racially changing neighborhoods. In other words, even though crime and race tend to move somewhat in the same direction, the overriding factor contributing to declining property values appears to be a rise in the incidence of crimes against property and not racial prejudice.

Our investigation also discloses that if race alone is considered, without the inclusion of any of the crime variables, property values still deteriorate somewhat. However, the impact of race alone is statistically less significant than the impact of crime, measured separately from race. Our findings indicate that education is a statistically more significant variable than either income, employment, or taxes.

POLICY IMPLICATIONS

Thus, if policy recommendations are to be based on the present analysis, one would suggest that containment of petty crime against property and raising the level of schooling should be emphasized for preventing continued urban deterioration as reflected by falling property values. Thus, while armed robbery and hold-ups capture the headlines, burglary has the most erosive effect on urban life.

In conclusion, we wish to point out that the analysis presented in this article is statistical in nature and as such only suggests more probable causes as opposed to less probable causes of urban deterioration. The analysis is based on available official statistical records and would inevitably reflect any deficiencies these records have.

Finally, crime is an expensive phenomenon. Using the coefficients of our analysis and the data, we estimate that, as a consequence of increases in burglaries alone, Indiana lost about \$624,823,834 (constant 1967 dollars) as a result of declines in property values in selected urban neighborhoods from 1960 to 1970.

CAGIT Adoption—A Case Study

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Because of a 1974 change in the law governing the use and adoption of the county adjusted gross income tax (CAGIT—adopted by the 1973 Indiana General Assembly as a part of a major tax restructuring package), a county council contemplating adoption of the local option tax for the first time in 1976 must make a decision to adopt by April 1, 1975. If the decision is to adopt the tax, individual tax withholdings would begin on July 1, 1975, and the revenue collected would be available to fund 1976 expenditures.

Anticipating a decision by the county council of Allen County as to the possible adoption of the local option tax (considered synonymous with CAGIT in this article), a study was conducted to identify and evaluate the important issues affecting such a decision. Two of the key findings, relevant for use by other policymakers in Indiana, have been singled out for presentation in this article.¹ The article concerns itself with property tax and income tax revenues available to finance local government expenditures exclusive of those used to finance schools and the bond levy.

1. This article is based on an unpublished study entitled "The Local County Option Tax and Allen County," prepared by the author in early 1974. The author is indebted to Donald W. Kiefer, director, Commission on State Tax and Financing Policy, for a constructive review of the original paper.

For a reasonably detailed account of CAGIT, see Donald W. Kiefer, "The 1973 Tax Package: The Effect on Local Governments," *Indiana Business Review*, XLVIII (September-October 1973), pp. 11-15.

Two key issues are highly relevant to the decision to adopt or not adopt the local option tax: what will be the impact upon tax revenue available to finance local government expenditures and what is the impact upon individual taxpayers? In responding to the first question the analysis presumes that local government officials prefer a taxing scheme that generate maximum tax revenues. It is not the author's intent to show whether this preference is a valid basis for making a choice. Given the pressure on local governments to improve services, expand services, and increase employee salaries, however, the assumption seems reasonable.

This analysis is projected to include the 1976-80 time period. A key feature of the state tax laws requires that the decision to adopt is irrevocable for a four-year period following adoption. Adoption in 1975 dictates that the decision is for the 1976-79 time period. The year 1980 was added primarily to better demonstrate the characteristics of the 1 percent local option tax after the property tax replacement credit and certified shares portion of the certified distribution have stabilized.

ASSUMPTIONS AND STEPS

In order to analyze the two key issues, it was necessary to make critical assumptions about the anticipated annual rates of growth of assessed property values and adjusted gross income. The assumptions pertaining to the

anticipated rate of growth in assessed property and adjusted gross income are as follows:

Total assessed property values for the 1975-79 time period are projected to increase at an annual rate of 5.079 percent. This is the rate which prevailed for the 1962-69 period during which two reassessments were conducted.

Adjusted gross income is projected at three different annual growth rates (8.57, 10.0, and 12.0 percent) through 1980. Table 1 shows that the adjusted gross income in Allen County grew at an annual rate of 8.57 percent in the 1964-72 period while the rate for the state was only 7.22 percent for the 1964-71 period. Since annual growth rates in Allen County's adjusted gross income are frequently in the 10 to 12 percent range, the analysis was expanded to include the 10 and 12 percent levels for the forthcoming five-year period.

In order to estimate the certified distribution for each year in the 1976-80 period, three steps were followed. First, to obtain the certified distribution for 1976, it was necessary to average the estimated adjusted gross income for Allen County in 1975 and 1976. This is required by the state tax laws since the 1976

certified distribution would be based upon tax withholdings in the second half of 1975 and the first half of 1976.

Second, the individual adjusted gross income, or taxable income, was estimated to be 80 percent of the adjusted gross income. During 1971 the actual figure was 79.31 percent while for 1972 the comparable figure was 81.08 percent.

Third, the certified distribution expected for a given year was derived by multiplying the individual adjusted gross income by 90 percent. Although the Indiana Department of Revenue currently uses 85 percent, it was reported that they are likely to raise this allocation factor after they have had some experience with making certified distributions to the adopting counties.²

IMPACT ON LOCAL TAX REVENUES

Table 2 compares the tax revenues available to local government units with and without the local option tax. Although the local option tax may be adopted at either the 1/2, 3/4, or 1 percent levels, this analysis is restricted to the 3/4 and 1 percent levels. Assuming that local government units favor a taxing system that provides the maximum revenue, the 1/2 percent option was eliminated because it generates significantly less revenue than that generated by property taxes in every year through 1980, with the gap widening each successive year. Revenues raised by the 3/4 percent local option tax will exceed those raised by property taxes alone in 1977 only and, in this case, the adjusted gross income must be growing at an annual rate of 12 percent. In 1978 and later

TABLE 1

Rates of Increase in Adjusted Gross Income for Allen County and Indiana, 1964-72

	<i>Allen County</i>	<i>Indiana</i>
1964-65	10.8	6.8
1965-66	11.1	10.3
1966-67	6.4	10.0
1967-68	10.0	10.0
1968-70*	9.0	12.1
1970-71	11.2	7.1
1971-72	10.6	N.A.
1964-71(72)†	8.6	7.2

*The 1969 income data on both Allen County and Indiana are unavailable. For Allen County it was estimated that the 1968-69 rate of increase was 5.0 percent and that the rate of increase for 1969-70 was approximately 3.8 percent.

†Calculated for the 1964-71 time period for Indiana since the 1972 data were not obtained for use in this study. This rate is the compounded annual rate of increase. The figures in the table above are rounded to this period. In the original calculations, the figures used were 8.57 and 7.22, respectively.

2. In recent correspondence, Kiefer stated that if Allen County had adopted the local option tax at the 1 percent rate as of July 1, 1973 the certified distribution from the Department of Revenue for 1974 would have been \$8,802,260. Using the procedure described above, the certified distribution 8.57, 10.0, and 12.0 annual growth rates in adjusted gross income would have been \$8,729,915, \$8,905,544, and \$9,153,820, respectively.

TABLE 2

Tax Revenues Available to Government Units in Allen County*

<i>Property Tax Dollar Levy (without CAGIT)</i>		<i>Tax Revenues Available with CAGIT Com- pared to Those Available without CAGIT; Rates of Growth in Adjusted Gross Income</i>		
		<i>8.57</i>	<i>10.00</i>	<i>12.00</i>
¾% Level of Adoption				
1976	32,272,921	-2,038,178	-1,916,837	-1,740,126
1977	33,911,965	-663,696	-323,168	+180,420
1978	35,634,252	-1,907,253	-1,452,791	-770,239
1979	37,444,009	-3,197,253	-2,610,618	-1,715,774
1980	39,345,678	-4,534,621	-3,795,163	-2,734,739
1% Level of Adoption				
1976	32,272,921	-2,038,178	-1,916,837	-1,740,126
1977	33,911,965	-663,696	-323,168	+180,420
1978	35,634,252	+1,125,168	+1,806,861	+2,830,690
1979	37,444,009	+95,046	+974,999	+2,317,265
1980	39,345,678	-960,171	+149,016	+1,739,652

*Excluding revenue for schools and bond levies.

years, revenues raised by the 3/4 percent local option tax fall short of those raised by property taxes by wider and wider margins.

Adoption of the local option tax at the 1 percent level is the only course which provides local governments with an attractive revenue generating alternative. However, when the adjusted gross income is growing at an annual rate of 8.57 percent, only in 1978 does the revenue from the 1 percent local option tax exceed significantly the revenue available from the property tax. As shown in Table 2, it appears that when the rate of growth of adjusted gross income is 10 percent or higher, the 1 percent local option tax eventually raises significantly more money for use by local government units. This is true for the 1976-80 time period, provided the local government units could adjust to the approximately \$2 million revenue shortfall in 1976.

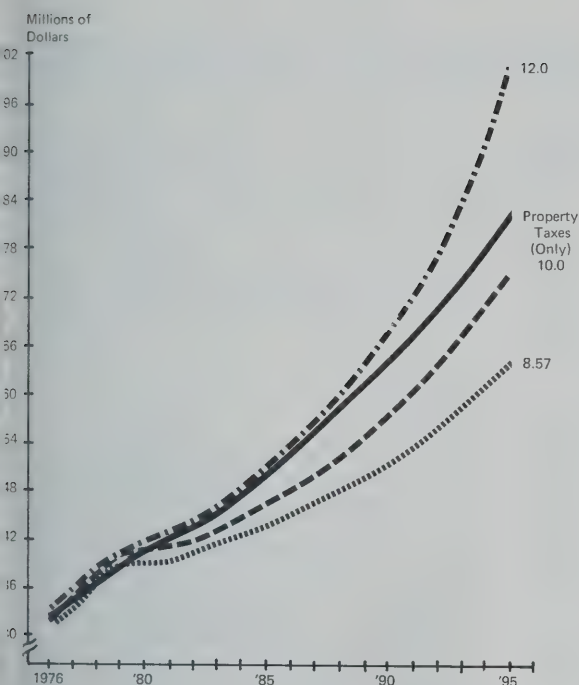
Extension of the analysis beyond 1980 (see the accompanying figure) establishes that in 1981 and beyond local government units would have significantly more revenue available without the local option tax when the adjusted gross income is growing at the 8.57 and 10

percent annual rates. At the 10 percent annual growth rate in adjusted gross income, the gap revenue available from the 1 percent local option tax and those available without the local option tax begins to narrow somewhat beginning in 1993.

The figure demonstrates that the 1 percent local option tax, combined with a 12 percent annual growth rate in adjusted gross income has superior revenue generating capabilities over the exclusive use of the property tax beginning in 1978. This revenue generating advantage, retained throughout the time period shown (1976-95). It can be noticed, however, that the advantage is not great through the mid-1980. In the latter part of the 1980s and in the early 1990s the revenue generating advantage of the 1 percent CAGIT begins to widen considerably.

IMPACT ON INDIVIDUAL TAXPAYERS

The decision to adopt or reject the local option tax has an important dimension beyond the potential revenues which can be raised to finance local government expenditures; this



Comparisons of Revenue Available to Finance Local Government in Allen County*

*With and without the 1 percent CAGIT and three different annual rates of increase in adjusted gross income.

ension is the extent to which the county's property owners will receive property tax relief. Table 3 shows the amount by which the adoption of the 3/4 and 1 percent local option tax would reduce the local government property tax rate.

At the 1 percent level of adoption, the average local government property tax rate would drop from \$3.9198 by approximately \$1.00 to \$1.60 during the 1976-80 period. With the 1973 average property tax rate in Allen County of \$10.00, adoption of the 1 percent local option tax would make it possible to reduce the local property taxes by an average of 12 to 16 percent, exclusive of the 20 percent reduction provided for in the 1973 changes in Indiana state tax laws.

The above figures do not really state the true cost-benefit picture as it affects the individual taxpayers in Allen County, but the impact can be estimated. In 1973, approximately 63 percent of all assessed property in Allen County was owned by corporations, and

the remaining 37 percent was owned by individuals. Adoption of the local option tax provides property tax reductions to all taxpayers while the additional income tax is levied exclusively upon individual taxpayers. For example, the adoption of the 1 percent local option tax in 1976, with the 8.57 percent growth in adjusted growth income, will provide a \$12,328,522 reduction in property taxes (\$7,717,758 due to direct property tax relief plus \$4,610,764 resulting from the 1976 potential levy of \$32,272,921 less the 1973 base levy of \$27,662,157).

In 1976 individual taxpayers would realize a potential net reduction of \$4,572,653 in property taxes, but they must in turn pay out \$11,433,714 in additional income taxes (part is paid in the last half of 1975 and the remainder is paid in the first half of 1976). Therefore, individual taxpayers in Allen County, upon adoption of the 1 percent local option tax in 1976, would pay an additional \$6,861,061 in taxes while the local government units would

TABLE 3

Local Government Property Tax Rates in Allen County*

<i>Without CAGIT</i>		<i>Rates of Growth in Adjusted Gross Income (with CAGIT)</i>		
		<i>8.57</i>	<i>10.00</i>	<i>12.00</i>
¾% Level of Adoption				
1976	3.9198	2.7349	2.7054	2.6625
1977	3.9198	2.8746	2.8549	2.8258
1978	3.9198	2.7093	2.6843	2.6468
1979	3.9198	2.5511	2.5204	2.4736
1980	3.9198	2.3997	2.3629	2.3101
1% Level of Adoption				
1976	3.9198	2.4224	2.3782	2.3138
1977	3.9198	2.5517	2.5124	2.4541
1978	3.9198	2.7093	2.6843	2.6468
1979	3.9198	2.5511	2.5204	2.4736
1980	3.9198	2.3997	2.3629	2.3101

*Excluding revenue for schools and bond levies.

lose \$2,038,178 of potential revenues to finance 1976 operations.

In 1979, when the proportion of property tax relief benefits will have already stabilized at the 1 percent level of adoption of the local option tax, individual taxpayers will be paying \$14,632,443 in additional income taxes while receiving a potential net reduction in property taxes of \$4,837,436.³ At this point, the local government units will have \$95,046 beyond what they could have raised from the exclusive use of property taxes.

The inefficiency of the local option tax, from the individual taxpayer's viewpoint, is further amplified when a 12 percent annual growth rate in adjusted gross income is combined with the adoption of the local option tax at the 1 percent level. In 1979, the local option tax would potentially increase revenues avail-

3. In this case, the property tax relief afforded by the CAGIT was \$3,292,299. However, property taxes are further reduced by deducting what they would have been in 1979 (\$37,444,009) less the 1973 base levy (\$27,662,157).

able to local government units by \$2,317,265.

To generate this additional money for local government usage, individual taxpayers will have to pay an additional \$17,924,621 in income taxes. The potential property tax reduction to the individual taxpayers will total \$5,111,510. The additional \$2,317,265 for local government usage in 1979 would cost the individual income taxpayers a net of \$12,813,111 beyond what they would have paid in property taxes only.

FINDINGS

Three rather broad conclusions can be drawn from the results of this study. *First*, the 1 percent level of adoption of the local option tax is the only alternative that would provide greater tax revenues for use by the local government units beyond those now generated by property taxes only. In Table 2 it is shown that the annual rate of growth in adjusted gross income must be in the 10 or 12 percent category to offer any significant increase in government revenues, and it is only at the 1 percent level that the gains are retained beyond the time frame dictated by the adoption of the local option tax.

Second, although there is genuine property tax relief afforded by the adoption of the local option tax, the individual taxpayers will experience a substantial increase in the total taxes which they pay to finance local government expenditures, excluding schools and bond levies.

Third, the rates of increase in total property values and adjusted gross income in each county will be crucial in determining the revenue generating potential, with and without the local option tax. The higher the rate of growth of assessed property values relative to the adjusted gross income, the less attractive the local option tax to local governments. It is imperative that policy makers in Indiana be provided information on the impact that inflation is expected to have upon property values and individual incomes.

n Econometric Forecast for 1975

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The current recession, which began a full year ago, appears likely to become the longest of the postwar U.S. economy. The November-December *IBR* "Outlook" took a decidedly pessimistic view of things to come; this forecast, compared with the use of a large-scale econometric model of the economy and with the advantage of preliminary fourth quarter data, confirms the gloomy view. Real output, or gross national product in 1958 dollars, will continue to decline through most of the first half of 1975. Although growth will resume in the latter half of the year, fourth quarter 1975 output will be only 3.9 percent above that of the same period 1974 and will still be less than fourth quarter 1973.

The rate of inflation will be lower in 1975, mainly due to weakness in the economy. Industrial and farm prices fell in December and will remain relatively stable throughout the year. Past increases in prices at the wholesale level are still being passed on to the consumer, and the price deflator for personal consumption expenditures will rise by 8.5 percent, well above the overall price increase of 4.70 percent, as measured by the price deflator for GNP.

The unemployment rate will continue to increase as output and productivity decline. The rate will peak at 7.9 percent of the labor force in early summer and then decline slowly through the latter half of the year to 7.1 percent as the impact of anticipated federal tax

cuts and job programs is felt. The tax cuts, combined with lower revenues, will produce the largest postwar federal government deficit of over \$40 billion for the year.

The Federal Reserve Board recently disclosed its commitment to a target growth rate in the money supply of 4.75 to 7.25 percent in 1975. This easing of monetary policy, coupled with reduced demand for consumer and business loans, caused the prime rate to fall to 9 percent and the rate on \$100,000 certificates of deposit to fall to 7 per cent in late January. Reduced reserve requirements and a continued increase in nonborrowed reserves have been incorporated into the model's structure. These factors combine to yield the forecast growth of the money stock of 5.9 per cent over fourth quarter 1974 and further decreases in short-term rates throughout the year. The corporate bond rate will edge up to 10 percent due to heavy Treasury borrowing despite an easier monetary policy.

Investment in residential structures will make a strong recovery from the extremely low level of fourth quarter 1974, but still will be weak by historical standards. Government action to lower the FHA-VA ceiling on mortgage rates to 8.5 percent and a recent commitment to subsidize the financing of single-family housing will provide some of the boost. A higher rate of personal saving and lower short-term market interest rates will make savings accounts more attractive and boost deposit inflows to mortgage oriented thrift institutions. Increases in housing prices will moderate as construction costs level off. A more substantial turnaround, however, will be

AUTHORS' NOTE—We wish to express our gratitude to Professor J. R. Green and the following members, who in addition to ourselves, participated in the Econometrics Workshop in the fall of 1974 at Indiana University: Steven Able, Henry Barker, James Adler, Henry Fishkind, and Leo Scherschel.

Gross National Product and Related Key Items (billions of dollars seasonally adjusted annual rates)

	1974 Actual		1975 Forecast				Percentage Growth 4Q (75-4Q ov 74-4Q)
	Q3	Q4	Q1	Q2	Q3	Q4	
Gross national product	1,416.3	1,428.0	1,426.4	1,457.5	1,503.5	1,553.9	8.8
Personal consumption expenditures	901.3	896.8	912.5	929.6	950.6	968.3	8.4
Automobiles and parts	56.2	43.7	55.3	58.8	62.4	65.1	37.3
Other	845.1	853.1	857.2	870.8	888.2	903.2	6.8
Gross private domestic investment	205.9	207.5	191.0	196.8	212.7	232.4	12.0
Fixed nonresidential investment	150.9	152.6	157.8	163.4	171.8	180.3	6.1
Residential structures	46.3	40.5	49.4	50.9	52.6	53.4	31.9
Change in business inventories	8.7	14.4	-16.3	-17.5	-11.8	-1.3	N.A.
Net exports	-3.1	+1.1	-6.6	-8.1	-9.7	-6.3	N.A.
Government purchases	312.3	322.4	329.5	339.2	349.2	359.5	11.5
Federal	117.2	122.8	126.4	128.9	132.2	134.6	9.6
Federal deficit	-1.9	-6.0	-41.9	-43.4	-41.7	-33.2	N.A.
GNP in 1958 dollars	823.1	803.7	797.7	804.3	818.7	835.5	3.9
GNP price deflator*	172.1	177.7	178.8	181.2	183.6	186.0	4.7
Personal consumption deflator*	164.7	169.2	168.9	170.9	177.6	183.5	8.5
Unemployment rate (percent)	5.5	6.5	7.6	7.9	7.6	7.1	N.A.
Personal income	1,168.2	1,186.4	1,198.5	1,217.5	1,246.0	1,275.9	7.5
Disposable personal income	993.1	1,008.7	1,029.1	1,047.4	1,072.1	1,097.1	8.8
Personal saving	65.7	85.4	94.1	94.3	98.0	104.4	22.2
Personal saving rate (percent)	6.6	8.5	9.1	9.0	9.1	9.5	N.A.
Three-month Treasury bill rate	8.19	7.36	8.14	7.43	7.01	6.52	N.A.
Long-term corporate bond rate	9.05	9.10	9.97	10.07	10.06	10.05	N.A.
Money supply—M1 (% change)	3.7	3.3	5.1	4.2	6.6	7.8	N.A.

*1958 = 100.

N.A. = Not applicable.

impeded by continued high mortgage rates which will be affected by the strong overall demand for long-term funds.

Personal consumption expenditures will rise by only 8.4 percent in 1975, due to weakness in the nonautomobile durable goods sector. Despite the forecasted increase in personal saving, liquid household assets will remain relatively low, retarding purchases of large items. The automobile industry, however, will make a good comeback from the disastrous second half of 1974. Sales promotions and price reductions achieved through factory rebates, in conjunction with easier financing, have stimulated January sales and will provide support throughout the year.

Government purchases are exogenous to the model, and we forecast an overall increase of 11.5 percent, with the largest increases at the state and local government level due to rising

costs and new job creation programs. Federal defense budget requests may be as high as 18 to 20 percent over last year's, but it appears unlikely that the Democratic Congress will approve them. A compromise tax cut will be enacted and will contribute heavily to the \$4 billion federal deficit.

The net export deficit will rise to \$7.5 billion as the impact of last year's rise of over 300 percent in foreign oil costs is felt. Despite rising world prices for agricultural and manufactured goods, exports will not offset the deficit as other countries channel their funds into fuel rather than U.S. imports.

We cannot offer an optimistic outlook for 1975. However, if we consider some of the price declines as leading indicators and the partial recovery of the automobile and housing industries, an improvement in the economy in 1976 appears probable.

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The Electric Power Industry
in Indiana—Part I

Bruce L. Jaffee

1

Foreign Students in Indiana

Richard N. Farmer and Ronald E. Hoyt

7

Hoosier Intrastate Migration

Cynthia Yasinski

10



Indiana Business Review

VOLUME L

MARCH-APRIL 1975

The Electric Power Industry in Indiana—Part I

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For the first time in many years, the electric power companies are in the forefront of public attention. Consumer groups are questioning the necessity of rate increases; the Indiana General Assembly at its most recent session discussed several major reforms of the regulatory process; and, earlier in the year, Governor Otis Bowen established a commission to investigate utility practices. This two-part study deals with the mechanics of the regulatory process for the state's electric utilities. The first article describes the present structure of the industry, state regulations, and the techniques of constructing electricity rates.

EDITOR'S NOTE: This article is the first of a two-part series dealing with the future pattern of electricity rates in Indiana. The second part, which will appear in a forthcoming issue of the *Indiana Business Review*, describes three expected changes in rate design. The author would like to thank J. Edward Ceman and Michael Champley, both graduate students in business administration at Indiana University, for their assistance with this project. James Suelflow of the IU faculty provided useful comments on an earlier draft.

THE INDUSTRY'S STRUCTURE

The electric utilities in Indiana constitute a large industry. In 1973 total industry sales were \$832 million, and Indiana ranked eleventh among the fifty states. There are three types of firms. The numerically smallest, but largest and most important, are the five investor-owned utilities. The other groups are the municipally-owned systems ("munis") and the rural electric membership cooperatives (REMCs).

The first group of companies are vertically integrated in the sense that they own generating facilities, transmission lines to conduct the electricity from the generating plants to their market areas, and distribution lines and equipment to get the electricity to the final customers. Munis and REMCs usually, but not always, own only a distribution system. They generally purchase electricity that has been generated and transmitted by the investor-owned utilities.

Each electric utility company has been assigned an essentially exclusive geographical

market area by the three-member Indiana Public Service Commission (PSC). However, this exclusive territorial franchise does not mean that the firm faces no competition. Natural gas, for example, is an excellent substitute for electricity in many uses, and each type of firm tries to attract customers to its market area. In addition to the now minor task of settling territorial disputes, the PSC has great control over the structure and average level of rates charged by the companies.

Almost all of the electricity used in Indiana is generated by the combustion of coal; this reliance on coal is a mixed blessing. On the positive side, Indiana's electric utility industry has had little difficulty obtaining adequate fuel supplies. This situation has not been the case in much of the country. While fuel prices have increased dramatically in the last two years, both the current fuel cost and the increase are much less than the national averages. These forces have been crucial in providing Indiana consumers with reliable and relatively inexpensive electric service.

On the negative side, the dependence on coal has exacerbated pollution problems. Not only is coal the fuel which causes the worst pollution problem of the fuels used for the generation of electric power, but, from an environmental point of view, the coal used in Indiana is low quality, especially in terms of sulfur content.

Estimates of the effluents from the approximately 700 steam-electric power plants in the

United States are calculated by the Federal Power Commission. These figures indicate that those plants which are major polluters in Indiana also have the dubious distinction of having a high national ranking as major polluters.

The Indiana and Michigan Electric Company's Twin Branch plant, for example, was the largest particulate polluter in the state in 1970 and it ranked eighteenth nationally. The Indiana-Kentucky Electric Corporation's Clifty Creek plant in Jefferson County led the state's list in terms of sulfur dioxide and nitrogen oxide effluents and ranked sixth and fourth respectively, in the national rankings. (A table listing the effluent level for all electric power plants in the state is available upon request from the author or from the *Indiana Business Review* editorial office.)

However, these pollution figures are measured in physical units of the effluent. More important, although extremely difficult to estimate accurately, is a dollar measure of the damages caused by the pollution. The rankings of plants in terms of dollar damages of pollution could possibly differ significantly from the rankings in terms of physical effluents.

THE PSC REGULATORY HEARING

Electricity rates can usually be changed only with the permission of the PSC after formal and extensive public hearings. For the so-called "Big

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"four"—Indianapolis Power and Light (IPALCO), Northern Indiana Public Service, Public Service Indiana, and Indiana and Michigan Electric—the rate-change request process frequently lasts twelve months or more from the initial filing by the company to the final decision by the commission.

Some Hoosiers may not remember that until the late 1960s almost all rate cases resulted in *reductions* in the average level of electricity rates. Since that period, rate increases have become the norm, and they have occurred with greater frequency.

Central to any regulatory hearing is the determination of the magnitude of revenue requirements and the types of costs to be assigned to various classes of customers. IPALCO, in its recent rate increase hearing, divided its customers into the following categories: REMC, residential, small commercial and industrial, large commercial and industrial, and other (mainly street lighting).¹ Other companies use approximately the same classification scheme. Because a regulated company is allowed to recover all justifiable expenses incurred in the provision of electric service, the greater the proportion of total costs allocated to a particular customer class, the higher will be the average level of rates. The most difficult part of the allocation procedure is determining how to assign joint and common costs. Unlike fuel and meter reading, such costs are difficult to assign to particular customer classes. Although conventions are used to allocate such costs, some of the procedures are arbitrary, and others make no economic sense.

One of the largest and most important of these categories is the production plant portion of fixed investment. In the IPALCO case, that

investment—before depreciation—totaled \$287 million. Since the PSC has recently allowed as part of a company's costs a return of 7.5 percent on fixed investment (which includes investment in production plant), alternative allocation formulas can greatly affect the rates for particular customer classes.

Economic theory maintains that the production plant category should be allocated to the various customer classes on the basis of each class' proportionate usage when the output of the system (the company) is at its peak. The reasoning behind this type of allocation procedure rests on the fact that an electric company must have sufficient generating facilities to meet the demands of its customers in order to avoid brownouts or blackouts. In particular, it must have generating facilities to meet the highest simultaneous demands of its consumers. (This argument ignores the possibility of purchasing power from other electric utilities when pooling or interconnection agreements exist.) Therefore, except during this so-called system-peak period, a company has excess generating capacity.

In the twelve-month period that ended June 30, 1974 (the so-called "test year" for the IPALCO regulatory hearing), the hourly system peak occurred between 3:00 and 4:00 P.M. on August 27, 1973, a time when the temperature in Indianapolis was 91° F and the relative humidity was 57 percent. However, on the average, during the test year the company was operating 44 percent below the level of system peak. Since the generation facilities must be constructed to meet the system peak, economists usually maintain that those who demand electricity at the system peak should be totally responsible for the costs of the production plant.

A consultant for IPALCO employed a different technique in which he assigned the production plant costs to the various customer classes on the basis of two equally weighted factors: proportionate peak usage and average usage during the year. The logic for including the second factor is that nonpeak customers do

1. Indianapolis Power and Light (IPALCO) is frequently used as an example in this article. This choice was made because the company was asking for a rate increase when this article was written (Public Service Commission of Indiana Cause No. 33735). As a result, a large amount of current information was readily available. One should not assume that the company's performance is any worse—or better—than that of other companies.

TABLE 1

Pro Forma Allocations for Indianapolis Power and Light Company (IPALCO) for the Twelve Months Ending June 30, 1974

	<i>Total Electric System Subject to PSC Jurisdiction*</i>	<i>Residential</i>	<i>Commercial & Industrial Small</i>	<i>Commercial & Industrial Large</i>	<i>Other</i>
Total Revenue	\$141,092,261	\$47,457,477	\$32,628,572	\$56,937,222	\$4,068,990
Operating Expenses					
Production	39,508,324	11,746,797	7,661,738	19,767,790	331,999
Transmission	1,663,706	513,506	375,924	768,250	6,026
Distribution	6,976,780	4,002,339	1,125,748	1,065,144	783,549
Customer accounting	2,836,581	2,305,637	260,744	251,475	18,725
Sales	1,689,404	375,386	450,564	638,257	225,197
Administrative & general	8,801,000	3,866,718	1,707,749	2,837,124	389,409
Taxes					
Income taxes	18,007,687	4,750,326	5,649,624	7,413,522	194,215
Other taxes	11,680,077	4,252,700	2,552,699	4,460,977	413,701
Capital expenses					
Depreciation	17,908,356	6,227,191	3,813,817	6,859,823	1,007,525
7.5 percent of net utility plant, materials & supplies†	33,047,095	12,141,979	7,209,098	12,716,628	979,390
Total expenses	142,119,010	50,182,579	30,807,705	56,778,990	4,349,736
Profit or (loss)	(1,026,749)	(2,725,102)	1,820,867	158,232	(280,746)

*These data exclude revenue and expenses allocated to the REMC portion of IPALCO's business. These types of sales are regulated by the Federal Power Commission.

†The 7.5 percent figure is the percentage allowed in recent cases before the Public Service Commission (PSC). "Net utility plant" refers to the original cost of the equipment after depreciation. The PSC has permitted the use of "fair value" estimates which have been larger than "original cost" figures.

SOURCE: Testimony of H. J. VanderVeen, Indianapolis Power and Light Company 1974 Electric Rate Case, presented before the Indiana Public Service Commission, November 1974.

use the generating facilities and, therefore, should pay some of the costs, but this argument is specious. Generating facilities are constructed to meet peak usage and are available to satisfy off-peak demand at an opportunity cost of zero.

Table 1 summarizes the customer allocations prepared by company consultants in the IPALCO case. For some hearings, alternative studies are prepared by the PSC staff or intervenors. In this particular regulatory case, use of a peak-responsibility allocation method rather than the technique used by IPALCO's

consultant would have increased the costs assigned to residential customers and reduced the costs for the other customer classifications. This table is the most important element in the construction of rate schedules.

The costs assigned to each customer class are subdivided into three categories: customer, energy, and capacity or demand. Customer costs are those which vary with the number of customers, such as customer accounting, connection costs, and meter reading. The largest cost element for electric utilities using fossil fuels is the energy component. This category

cludes those costs which vary with a customer's usage of electricity—measured in kilowatt-hours (KWH)—such as fuel. Total capacity costs depend upon the customers' maximum demand for electricity—measured in kilowatts (KW)—both individually and collectively. The greater these demands, the larger must be the production plant and transmission and distribution lines; consequently, the costs of providing electric service to customers will rise.

The customer and capacity components of total cost are fixed in the sense that they do not vary with the level of KWH sales. Therefore, the companies have argued (and the PSC has generally agreed) that rates should decline as a customer purchases more electricity because the fixed costs are spread over more units.

Sections A and B of Table 2 show this basic declining marginal and average price in IPALCO's current and proposed basic residential rate schedules. (Section C is an alternative price schedule proposed by the author and is discussed in detail in Part II of this study.) Virtually all current rates include this declining block structure feature. Some rate structures, primarily those for commercial and industrial users, also include a capacity charge which is based on the customer's maximum KW demand at the billing month.

RATE SCHEDULES AND THE PUBLIC

The major electric utilities in the state have a large number of rate schedules. For example, both Public Service Indiana and IPALCO have approximately twenty. Table 3 describes the major rate classifications used by IPALCO and the number of customers using that schedule. Most small customers do not know the precise rate structure used to derive their electricity bills, but companies will provide and explain the applicable rate schedule upon request.

Generally, utilities have made only sporadic and halfhearted attempts to inform all their

customers of the price structure, possibly because rates have increased rapidly in recent years. It is unlikely that any firm would enthusiastically inform its customers of higher prices. Thus the PSC should take most of the blame for this lack of information. In some

TABLE 2

Residential Rate Structures for IPALCO

A. Rates Effective August 9, 1971*

First 60 KWH per month at 4.5¢ per KWH†
Next 60 KWH per month at 3.3¢ per KWH
Next 180 KWH per month at 2.5¢ per KWH
Next 350 KWH per month at 2.0¢ per KWH
Next 350 KWH per month at 1.6¢ per KWH
Excess over 1,000 KWH per month at 1.2¢ per KWH
Minimum monthly bill—\$2.50

B. Rates Proposed by IPALCO in 1974 Rate Case*

First 60 KWH per month at 5.85¢ per KWH
Next 60 KWH per month at 4.29¢ per KWH
Next 180 KWH per month at 3.25¢ per KWH
Next 350 KWH per month at 2.60¢ per KWH
Next 350 KWH per month at 2.08¢ per KWH
Excess over 1,000 KWH per month at 1.55¢ per KWH
Minimum monthly bill—\$3.00

C. Alternative Rate Structure Proposal‡

Fixed fee or charge—\$7.00 per month
First 60 KWH per month at 3.70¢ per KWH
Next 60 KWH per month at 2.70¢ per KWH
Next 180 KWH per month at 1.70¢ per KWH
Excess over 300 KWH per month at .82¢ per KWH
Minimum monthly bill—\$7.00

*These were the rate schedules presented by the company in the 1974 IPALCO rate case.

†KWH = kilowatt-hour.

‡This alternative schedule was calculated by the author. It is based on data presented by IPALCO and its consultants in the 1974 rate hearing with adjustments made by the author. For purposes of comparison and simplicity, it does not include a variant of peak-load pricing although, as discussed in the text, such an addition would be highly desirable. The schedule was constructed on the assumption that usage would not respond to changes in rates—that is, price elasticity is zero. This assumption is wrong; recent studies have found that the elasticity is approximately -1. However, since the company assumed a zero elasticity in its newly proposed rates, the alternative proposal makes the same assumption in order to facilitate comparison.

TABLE 3

Major Rate Classifications Used by IPALCO

<i>Schedule*</i>	<i>Title</i>	<i>Number of Customers†</i>
A	Residential: without electric water heater	211,068
A-C	Residential: with electric water heater	34,929
ESC	Residential: electric space conditioning (heating and air conditioning) without electric water heater	2
ESC-C	Residential: electric space conditioning (heating and air conditioning) with electric water heater	10,471
Employee	Residential: employees only	1,484
	Residential: employees only—electric space conditioning	
UCS‡	Water heating: uncontrolled service	2 §
CS‡	Water heating: controlled service	1,455 §
B	General service: lighting and power	29,314
BE	General service: electric space conditioning	822 §
D	Industrial: power and lighting	3
E	Light and power: secondary voltage (50 KW minimum demand)	1,134
H	Optional hospital: primary voltage (100 KW minimum demand)	1
J	Power service: primary voltage	143
K	Residential or commercial: cooking or air conditioning only	16
L	Industrial: heating used for manufacturing purposes	12
M	Light and power: secondary voltage (500 KW minimum demand)	99
N	Total electric supply: all voltages (200 KW minimum demand)	38
MU-4	Municipal street and traffic signal lighting	102
A-PL	Automatic protective lighting service	

*These are the new schedules proposed by the company. They differ slightly from those in effect in 1973 when the customer data were collected.

†The number of customers during 1973 were calculated by dividing the total number of bills subject to that rate schedule by the number of billing periods in that year (usually twelve).

‡Controlled service differs from uncontrolled service in that in the former case the company has the option of installing timing devices that will automatically turn off the water heater for up to six hours per day. The company has not used this option. For a further discussion see the section on peak-load pricing.

§These three rates are only available to customers with other electric service, and the services are separately metered. Thus, these customers are counted twice.

|| KW = kilowatt.

SOURCES: These schedules were filed by IPALCO in its 1974 electricity rate case and in its *Annual Report* for the year ending December 31, 1973 (filed with the Federal Power Commission).

rates, the rate structure is printed on bills.² The commission should at least require the companies to print the applicable rate structure once a year on the inserts that are usually included with the monthly bills. Such a minor requirement should provide at least as much useful consumer information as the jokes and recipes that are the typical "bill stuffers."

Two important comments should be made concerning Table 3. *First*, certain rate schedules are used only by a small number of customers. These schedules possibly were devised for only

2. In a recent decision the Missouri Public Service Commission ordered Missouri Public Service Co. to print on the back of each bill the approximate rate increase proposed by the company. The announcement is required before the commission will hold hearings on the increase request.

a few specific customers or were discontinued in the past and now serve only a few of the original customers. *Second*, each of the customer classes designated in the cost allocation study summarized in Table 1 is subdivided into numerous classifications for the purpose of constructing rates.

Although there may be cost-based reasons for the many rate schedules in each classification, the justification relies, to a large extent, on implicit judgments and estimates. Other noncost reasons may be used to develop these individual rate schedules, such as the competitiveness of natural gas and fuel oil as a source of space heating, the price elasticity of demand, and the costs for customers to generate their own power.

Foreign Students in Indiana

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In a world where any sales are difficult, Indiana's colleges and universities are doing extremely well. The pattern of foreign student enrollments shows steady and even spectacular increases. Currently Indiana gains about \$30.4 million annually through foreign student expenditures. Part of this spending comes from student dependents. For example, at the Indiana University-Bloomington campus alone, more than 400 of these student dependents poured an estimated \$2.24 million into Indiana last year.

Ironically, foreign students continue to come in increasing numbers despite official neglect, almost total lack of financing to encourage them, and great indifference to their problems. Nevertheless, the vast majority go home appreciative of what Indiana has done for them. Because Indiana's colleges and univer-

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sities are so highly regarded in many parts of the world, the advantages to the state in having such people scattered here and there around the world community are enormous.

PAYING THE BILL

We are often asked about financing of foreign students. Many of us remember the days just after the war when most foreign countries were impoverished, and we can also recall that the handful of foreign students then in Indiana were largely financed locally—through government grants and scholarships. Indiana, like most other states, generously supported foreign students, who were considered a drain on revenues rather than a gain.

But in the past twenty-five years, other

TABLE 1

Change in Foreign Enrollment, 1969-74

	1969	1974*	% Change
Indiana University-			
Bloomington	1,192	1,887	37.0
Notre Dame	294	319	8.5
Purdue	757	900	19.0
Other	960	1,331	28.0
Totals	3,203	4,437	28.0

*Estimated.

countries have gained affluence, and some of them, such as the oil-producing states, have achieved enormous wealth. When foreign students now come to Indiana, they are usually financed from abroad. Indiana support is almost entirely limited to pay for teaching and other work. Many foreign students do teach, since the majority are advanced graduate students. Their small pay is for services rendered, not a gift.

THE INCREASING NUMBERS

Table 1 shows a 37 percent increase in the foreign student population at Indiana University since 1969. In 1974, 300 new foreign students were admitted at the Bloomington campus for the spring semester. (These students, not included in the 1974-75 fall enrollment figures, make this year's second semester foreign student enrollment the largest in I.U.'s history.)

This increase in the number of foreign students is repeated in most Indiana schools. The table also shows estimated totals for all Indiana colleges and universities. The overall increase of 28 percent appears significant, particularly at a time when slowing rates of enrollment among U.S. students make this expansion easy to handle. Unlike the 1969-70 period, when our campuses were having diffi-

culty in handling extra students, we now can easily expand our foreign student population.

We have an efficient international division in our Indiana State Department of Commerce and we worry a great deal about making exports, but few people know or care much about this foreign student export selling we are doing without much effort. Indeed, if there is an reaction at all to our foreign students, it is to cut the dean of foreign students' budget, and to try to hide the fact that there are any foreign students here at all, since too many legislators seem to believe that they represent a drain on the state's scarce educational funds.

From an economic view, we should be out trying to find some more foreign students. And because Indiana's colleges and universities, both public and private, are so highly regarded in so many parts of the world, this particular selling job would be one of the easier ones to do in recessionary times.

THE ECONOMIC BENEFITS

In 1971, we took a look at the economic benefits to Indiana of its foreign student population. At that time, we noted that foreign students purchase an Indiana export, since they bring money from abroad to pay for their education; they are buying an Indiana product in the same way as a foreign buyer does when he orders a machine from an Indiana producer.¹

Based on a rule-of-thumb calculation that every \$10,000 of expenditures yields one job, some 3,100 Hoosiers are now employed because these students are here. Every increase of 1,000 foreign students brings another \$50 million into the state and generates an extra 100 jobs. In other words, each student is worth about \$5,000 to \$6,000 per year to the state or perhaps the equivalent of selling one diesel

1. Richard N. Farmer and William E. Renforth, "Foreign Students in Indiana: Our Intangible Exports," *Indiana Business Review* (May-June 1971), pp. 12-16.

TABLE 2

Foreign Student Spending in Indiana*
academic year 1974-75; 4,437 students)

Individual expenditures	
Fees	\$ 7,542,900
Room	2,662,200
Board	4,437,000
Books and supplies	1,331,100
Incidentals	3,549,600
Less fee remissions	(975,000)
Total, individual expenditures	\$18,547,800
Other Items	
Summer expenses	\$ 6,655,500
Expenses for spouse	3,729,600
Expenses for child	1,491,200
Total, other items	\$11,876,300
Total	\$30,424,100
Increase in dollar expenditures 1974 compared with 1969)	\$12,794,700

*Calculations are based on standard fees for foreign students as published by the Office of the Registrar, Indiana University.

line or light truck abroad (see Table 2 for a summary of student expenditures).

In both cases, the state gains income and employment.

To put it mildly, the economy has not been doing very well recently, and many Indiana industries are now showing significant declines. In our review of the current Indiana foreign student population we have found a growth industry, one that seems bound to continue growing, regardless of the state of the economy.

OTHER BENEFITS

These narrow measures of economic gain perhaps miss most of the longer-term benefits. Indiana University now has students from 102 countries (twenty-five years ago, there only 25; some seventy-five countries in the whole world). As Indiana businessmen spread out across the globe to find export sales, it is rather

nice to run into an I.U. alumnus in some far-off corner of the world. Because our foreign students typically represent the brightest and best people from their home countries, they are usually found, ten years later, well-placed in the highest business, government, and educational circles.

Need a good contact in Saudi Arabia? Consult our alumni list. How about a company sales representative in Malawi? We shall have our man there before too long. Or, if Soviet and East European trade expands as expected in areas such as heavy capital equipment and agricultural products, Indiana will be competitively and strategically placed. Take a look at our present student lists. We have a Soviet citizen, eight Poles, five Romanians, five Czechs, and a Hungarian now at Indiana University. If trade with the oil-rich countries is interesting, talk to our hundred Saudi Arabians, the seven Iraqis, the five Iranians, our eighteen Libyans, the three Norwegians (yes, Norway will soon be a major petroleum exporter), or our fifteen Venezuelans.

As teachers, we know full well of another major benefit of having foreign students. Our local students get glimpses of other cultures just being in class with these people and form friendships that lead to other contacts yielding mutual benefits only dimly perceived at present. A recent study on Indiana's foreign image suggested that we really do not have one in most parts of the world.² Few outside the Midwest know or care what we are up to. But here and there, scattered all around the world, are some ex officio Hoosiers who not only know a lot about us but often are our best boosters.

It is sad that we cannot do more for them while they are here and that we cannot figure out more effective techniques for getting more of them to come. We have a real growth industry which yields important benefits to the state, and few Hoosiers even know it exists.

2. Jaap Kamp, "Indiana's Image Overseas," *Indiana Business Review* (October 1974), pp. 13-16.

Hoosier Intrastate Migration

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The interstate migration of Indiana's population was examined in the July-August issue of the *Indiana Business Review* ("Hoosiers—Where Do They Come From and Where Do They Go?" pp. 10-16). This article continues the discussion by considering *intra* state as well as interstate movers; the focus is on their origins and destinations within the state.

The geographical preferences of Indiana movers can be detected by measuring the inflow and outflow among the seventeen State Economic Areas (SEAs), a division of the state's ninety-two counties made by the U.S. Bureau of the Census (see Figure 1). The nine nonmetropolitan SEAs (numbered areas) include eighty-two of the state's counties and 52 percent of the 1970 population over 5 years old. The eight metropolitan SEAs (lettered areas) include ten counties and 48 percent of the state's population over 5 years old.¹

PATTERNS OF IN-MIGRATION

Of the 662,000 people who changed residence since 1965 and who were living in Indiana in 1970, nearly 54 percent came from out of state; over half of these interstate movers chose to live in metropolitan areas (see Table 1). Only

those new Indiana residents who had been living in the western Mountain and Pacific divisions of the country in 1965 showed a slight preference for the nonmetropolitan areas. From all other sections of the country, the majority of in-migrants to the state chose major metropolitan areas.

Although new Hoosiers from out of state seem to prefer metropolitan settings, the opposite is true for those who moved within the state. Of the 304,856 persons, age 5 or older, who moved to different counties within Indiana between 1965 and 1970, 64 percent went to nonmetropolitan areas (Table 1). Whether they came from metropolitan areas or not, the movers preferred smaller cities and suburban and rural environments.

Groups of rural or metropolitan SEAs differ greatly in their attraction for new residents from other states (see Table 2). Marion County (SEA D—Indianapolis) and Lake and Porter Counties (SEA A—Gary/Hammond) absorbed the highest numbers of new residents in the state—59,207 and 43,918, respectively.

1. Metropolitan SEA refers to State Economic Areas composed of one or two counties that are largely urban in nature. This term should not be confused with the term SMSA (Standard Metropolitan Statistical Area).

TABLE 1

Origins and Destinations of Indiana Residents, 1965-70

Origins	Destinations Within Indiana		Total
	Nonmetro- politan SEAs	Metropolitan SEAs	
Nonmetropolitan			
Indiana SEAs	96,357	82,883	179,240
Metropolitan Indiana SEAs	98,875	26,741	125,616
Total Indiana	195,304	109,624	304,928
U.S. Divisions			
Northeastern	3,489	3,777	7,266
Mid-Atlantic	12,969	15,094	28,063
East North Central*	64,057	68,779	132,836
West North Central	13,063	14,509	27,572
South Atlantic	19,602	20,409	40,011
East South Central	27,001	32,994	59,995
West South Central	10,191	10,866	21,057
Mountain	6,910	5,601	12,511
Pacific	14,490	13,362	27,852
Total	171,772	185,391	357,163
Total all areas	367,076	295,015	662,091

*Excluding Indiana.

SOURCE: 1970 Census of Population, U.S. Department of Commerce, Bureau of the Census (Washington, D.C.: U.S. Government Printing Office, PC (2)-2E).

between 1965 and 1970. Allen County (SEA F-Fort Wayne, 23,700) and St. Joseph County (SEA B-South Bend, 19,800) also have high levels of in-migration.

As one would expect, the counties surrounding these large cities absorb a number of migrants as well, particularly those counties around Indianapolis (SEA 5) and Gary-South Bend (SEA 1). Less obvious is the popularity of SEA 4, the group of counties surrounding Muncie, which had 28,854 in-migrants. Muncie itself (SEA H) had 8,678 new citizens, the smallest number among all SEAs in the state. SEA 9, a large area in west-central Indiana with a city large enough to be classified as metropolitan, received almost 31,000 people.² Table 1 gives the figures for each SEA's migration.

On the basis of these figures alone, it is tempting to say that the greater Indianapolis

and Gary-South Bend areas are attracting the largest numbers of migrants and are perhaps growing more than other SEAs. But as Table 2 indicates, these areas have large populations to begin with, and a greater flow of persons in and out of the area is to be expected. The populations of the Indianapolis and Gary-South Bend areas make up about 12 and 15 percent of the state total, and they received 12 and 16 percent, respectively, of the state's in-migrants, very much in proportion with their size. Only SEA 1 (counties surrounding Gary) and SEA C (Allen County) attracted significantly more than their "share" of the state's in-migrants. SEAs 3 (surrounding Ft. Wayne), 4 (surrounding Muncie), and 6 (outside Evansville

2. Tippecanoe County (Lafayette), while qualifying as an SMSA, is not large enough to be a separate SEA.

TABLE 2

Population and In-migrants, Indiana SEAs, 1970 (5 years old and over)

SEA	Population	Population as % of State Total	In-migrants From Other States	In-migrants as % of SEA Population	SEA In-migrants as % of State In-migrants
1	210,653	4.44	20,836	9.9	5.7
2	149,826	3.17	10,518	7.0	2.9
3	228,556	4.83	13,321	5.8	3.6
4	454,161	9.59	28,854	6.4	7.9
5	379,548	8.02	24,102	6.4	9.2
6	280,534	5.93	12,662	4.5	3.4
7	235,869	4.98	20,354	8.6	5.5
8	159,235	3.37	10,244	6.4	2.8
9	364,013	7.68	30,881	8.5	8.4
A	575,352	12.14	43,918	7.6	12.0
B	224,781	4.74	19,800	8.8	5.4
C	254,170	5.36	23,711	9.3	6.5
D	721,506	15.22	59,207	8.2	16.1
E	156,135	3.29	10,205	6.5	2.8
F	120,107	2.53	10,884	9.1	3.0
G	106,097	2.23	8,988	8.5	2.4
H	117,705	2.48	8,678	7.4	2.4
Total	4,738,248		357,163		

SOURCE: 1970 Census of Population.

and Terre Haute) had significantly less than their proportional share.

On the average, in-migrants from other states make up 7.9 percent of the total population of an SEA. Measured by this standard, only 7.6 percent of SEA A's population were in-migrants while SEA D exceeded the state average with 8.2 percent. SEAs 1, 5, C, and F all had unusually high percentages of in-migrants. Data on out-migration and net gains or losses are needed to speculate on possible trends.

PATTERNS OF OUT-MIGRATION

Between 1965 and 1970, about 706,000 Hoosiers moved out of their home counties. Of these movers slightly over half, 57 percent moved to a different state; 28 percent went to nonmetropolitan or rural areas within Indiana;

and the remaining 15 percent settled in urban Indiana SEAs.

Table 3 shows the type of destination chosen by out-migrants from each Indiana SEA. Residents of nonmetropolitan areas were more likely to stay within the state when moving; 52 percent of the nonmetropolitan movers left Indiana as opposed to 63 percent of the metropolitan migrants. Of the rural movers who stayed in Indiana, 26 percent moved to another nonmetropolitan area, and 22 percent moved to an urban area.

The figures for the metropolitan population are not as equally divided. Sixty-three percent of the movers left the state; almost all of the rest (29 percent) settled in rural or suburban areas; and only 8 percent moved to another metropolitan area in Indiana. It appears that the exchange of population among Indiana metropolitan areas is not lively.

Among individual SEAs in the non-metropolitan group, several differ markedly

BLE 3

Population and Out-migrants, Indiana SEAs, 1965-70

	Popu- lation	Popu- lation as % of State Total	Out- migration to Metro- politan SEAs	Out- migration to Nonmetro- politan SEAs	Out- migration to Other States	Total	Total Out- migration as % of SEA Population
A	210,653	4.44	6,014	5,123	20,126	31,263	14.8
B	149,826	3.17	5,288	8,263	9,903	23,454	15.6
C	228,556	4.83	8,832	7,054	15,564	31,450	13.8
D	454,161	9.59	11,729	16,884	33,223	61,836	13.6
E	379,548	8.02	17,578	18,196	23,518	59,292	15.6
F	280,534	5.93	10,162	10,196	15,060	35,418	12.6
G	235,869	4.98	9,761	9,064	21,369	40,194	17.0
H	159,235	3.37	3,624	7,287	11,533	22,444	14.1
I	364,013	7.68	9,895	14,290	39,987	64,172	17.6
J	575,352	12.14	5,021	11,617	54,914	71,552	12.4
K	224,781	4.74	3,230	6,980	26,755	36,965	16.4
L	254,170	5.36	2,611	10,640	21,254	34,505	13.6
M	721,506	15.22	7,427	45,703	64,538	117,668	16.3
N	156,135	3.29	2,176	7,154	14,372	23,702	15.2
O	120,107	2.53	932	3,447	9,644	14,023	11.7
P	106,097	2.23	2,768	5,431	9,220	17,419	16.4
Q	117,705	2.48	2,576	7,975	9,788	20,339	17.2
Total	4,738,248	100.0	109,624	195,304	400,768	705,696	

on the average. A higher percentage of
movers from SEA 1 (around South Bend) go
out of state, as would be expected from its
proximity to the Michigan border. The opposite
is true in Area 5 around Indianapolis, perhaps
because of its central location or possibly
because of the attraction of the capital city.

Among the urban areas, Muncie (H), Terre
Haute (G), and Indianapolis (D) lose fewer
residents to moves out of the state than the
average of 63 percent. In SEA D, the percent-
age of people moving to another city in Indiana
is 63 percent, the smallest of all Indiana SEA
percentages.

In gross figures, the areas with the largest
populations, Gary and Indianapolis, accounted
for the largest percentage of out-migrants: 10
percent of all movers came from Gary and 17
percent from Indianapolis. Area 9, in west-
central Indiana, had the highest number of
out-migrants among nonmetropolitan areas.

NET MIGRATION

The combination of in- and out-migration
figures yields net results and shows the effect of
migration upon the population (Table 4). As
expected, Area 5 had the largest net gain, and
Areas A and D had the largest net losses.

Urban-Suburban Flow—The “flight from
the city” into the relatively peaceful and safe
suburbs or countryside has been widely publi-
cized. Given less coverage but equally inter-
esting is a the trend to redevelop historic
buildings and neighborhoods within city limits,
to reject the suburban stereotypes, and to
rediscover the city community.

Figure 1 indicates the movement in and out
of Indiana’s urban and nonurban SEAs. For
instance, for each hundred people moving out
of Lake and Porter Counties (A) into SEA 2,
only fifty-six from SEA 2 moved into SEA A, a

TABLE 4

Net Migration for Indiana SEAs

SEA	Net Migration*
1	+406
2	-222
3	-3,282
4	-8,615
5	+12,571
6	+272
7	+5,054
8	-5,133
9	-3,570
A	-18,677
B	-8,945
C	+4,022
D	-17,955
E	-7,247
F	+1,701
G	+2,979
H	+3,036
Total	-43,605

*In = +; out = -.

ratio of .56. A more equal flow is seen between St. Joseph County (South Bend) (B) and SEA 1, where the ratio is .97. Lake, Porter, Marion, and Vanderburgh are the only metropolitan Indiana counties from which the outflow was consistently greater than the inflow. Of these, Marion County (Indianapolis) was the most extreme; only fifty-two people entered for each hundred who left.

In Floyd/Clark (Jeffersonville-New Albany), Vigo (Terre Haute), and Delaware (Muncie) Counties, however, there was a moderately large inflow from the surrounding counties. It is not possible to say whether these figures represent a movement back into the city. A general movement out of the southwest corner of the state, for instance, may affect the flow from SEA 6 into Vigo County, while the proximity of another large city, Louisville, may explain some of Floyd and Clark Counties' attractiveness to residents of SEAs 7 and 8. Still another factor is the manner in which the SEAs

are divided. SEA D, Marion County, is taken almost entirely by Indianapolis, and SEA F is made up of Floyd and Clark Counties and includes more suburban and rural area than does SEA D.

Northern Indiana—The estimation and prediction of migrating trends on a larger scale than in and out of the city is hazardous and confusing. Figure 2 shows the net gain or loss for each SEA. It is easy to see that all of the northern Indiana SEAs (1, 2, 3, A, B, and C) had net losses of population except C, Allen County (Fort Wayne). Since the urban area data show fairly equal give and take among St. Joseph County (South Bend), Allen County (Fort Wayne), and their respective outlying areas, we may assume that most of St. Joseph's loss and Allen's gain are from more distant areas in the state.

The northern SEAs were the destination of 23 percent of all Indiana movers who stayed within the state; 27 percent of these movers left this part of the state but stayed in Indiana. Gross figures are given in Table 5; about 43 percent of the interstate movers from the north stayed in that region; 43 percent went to the central part of the state; and the remaining 14 percent moved to southern Indiana.

Central Indiana—In general, central Indiana was a net gainer in the period between 1960 and 1970. Most areas gained in population because of intrastate migration, although Marion County lost to its suburban areas, as expected, and SEA 4 was one of the few places in the state to have a net loss to Marion County (Indianapolis). Delaware County gained from the north, and Vigo County added from the southern SEAs, SEA 6 in particular.

Central Indiana was the destination of 23 percent of those Hoosiers who moved within the state; 16 percent went to SEA 5, 13 percent to D, and 10 percent to SEA 9. Fifty-four percent of all intrastate movers left Central Indiana, 18 percent alone from Marion County. About 65 percent stayed in central Indiana; 16 percent and 15 percent went to southern and

FIGURE 1
Migration Patterns in Indiana

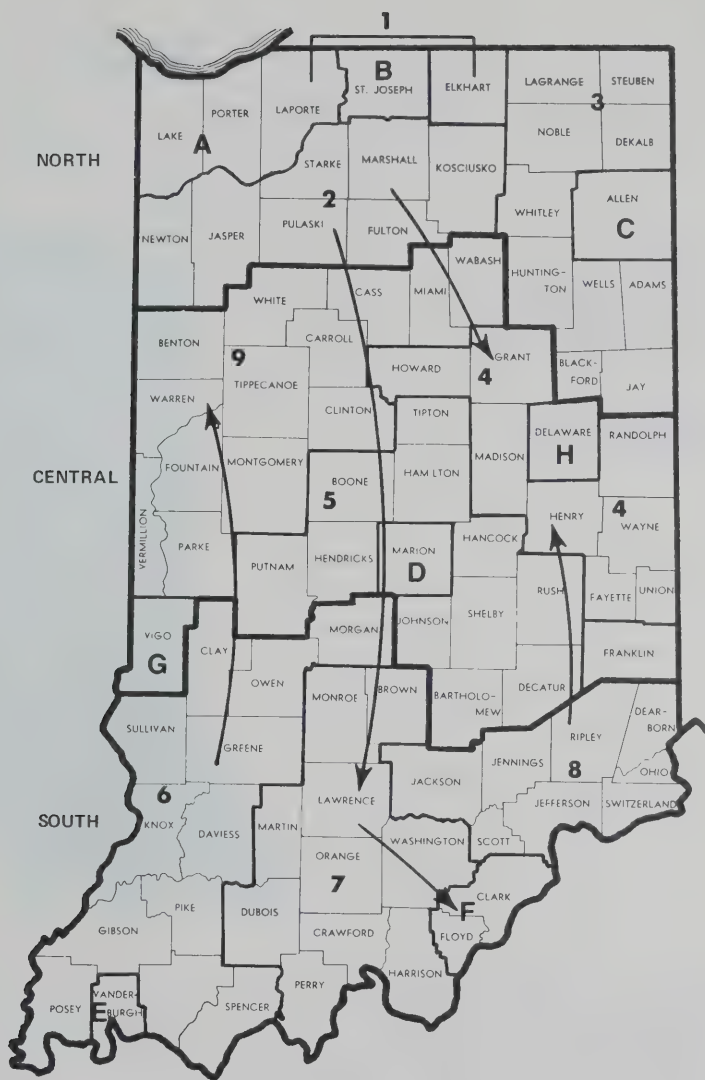


TABLE 5
Net Migration Within Indiana
(Movers across SEAs)

Origins	Destinations		
	North	Central	South
North Indiana	33,852	32,126	7,933
Central Indiana	24,295	104,060	32,097
South Indiana	5,478	32,276	26,049
Total SEA movers—298,166			

SOURCE: 1970 Census of Population.

northern Indiana, respectively. As Table 5 indicates, the central SEAs gained fairly equal inflows from northern and southern Indiana.

Southern Indiana—The five southern Indiana SEAs had net gains and losses between those of the northern and central areas. There appears to be a flow out of the southwest corner of the state, Vanderburgh County in particular, into areas 6, 7, and G; an opposite movement leads from SEAs 7 and 8 into F, the Jeffersonville-New Albany area. A section of the state with a somewhat smaller population than the northern or central areas, southern

Net Gain from Interarea (Intrastate) Migration



and 1970, this number represents a small percentage of the total Indiana population (less than 1 percent).

Main currents of movement seem to be toward the center of the state, strongly from the north and moderately from the south. Lake/Porter (Gary) and Vanderburgh (Evansville) Counties appear to be the only ones losing population; Indianapolis's loss is probably due to a shift to the counties surrounding SEA D.

Growth occurred in cities of Fort Wayne, Terre Haute, Muncie, and Jeffersonville-Nashville-Albany. Centers of population naturally shift, and with sufficient notice and proper preparation Indiana's residents can take such shifts stride.

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MAY-JUNE 1975

Indiana Business Review

Highlights of the Outlook—A Message from the Dean	1
The Outlook: A Reevaluation of the Forecast for 1975	2
Government Purchases of Goods and Services	5
Business Fixed Investment	6
Residential Construction	7
Automobiles	8
Other Personal Consumption Expenditures	9
Inventories	10
Net Exports	11
Interest Rates, Prices, and Money	12
The Indiana Economy	13
Gary-Hammond-East Chicago	13
South Bend-Elkhart	15
Indianapolis	16
Muncie	18
Southeastern Area	19
Evansville	20
Terre Haute	22
Fort Wayne	23



Indiana Business Review

VOLUME L

MAY-JUNE 1975

HIGHLIGHTS OF THE OUTLOOK—A MESSAGE FROM THE DEAN

Once again the Indiana University School of Business presents its midyear Outlook edition of the *Indiana Business Review*. A faculty team in the School of Business reviews its earlier forecast for 1975 (made in the November/December issue of *IBR*) and presents its current view of business conditions for the remainder of 1975.

The outlook team is cautiously optimistic. It believes that the recession will "bottom out" in the current (second) quarter, that a gradual recovery will begin in the third quarter, and that the recovery will become moderately brisk in the fourth quarter.

The cautious optimism of the outlook team is tempered, however, by the belief that the unemployment rate will remain high and by the threat of renewed "virulent" inflation that could accompany a strong recovery. The forecast is not favorable for certain expenditures, particularly for capital equipment and automobiles. The poor outlook in these areas suggests a slow recovery for the Indiana economy, which depends rather heavily upon them. Some of the metropolitan areas in the state expect their recoveries to lag behind the national recovery.

We hope that the material in these pages will provide information useful to all who are concerned about business decisions in the near future. We believe that it provides a solid base for continuous discussion and evaluation as events unfold throughout the remainder of 1975.

Schuyler F. Otteson, Dean
School of Business
Indiana University

The Outlook: A Reevaluation of the Forecast for 1975

The current recession is unique in the history of this country. Early in 1974, a combination of events triggered a series of major disequilibrating forces in the United States economy. Several of these were discussed in our forecast of late last year. The most dramatic, of course, was the oil embargo and the subsequent quadrupling in the price of imported oil. This event had the direct effect of causing shortages of gasoline and petroleum-based materials, and the indirect effect of driving home to the American people two unpleasant facts about which the experts had long been warning us. Namely, that energy consumption in this country simply cannot continue to increase at a rate compara-

This issue of the Outlook was prepared by Eugene Brady, Joseph Miller, Ross M. Robertson, Howard G. Schaller, Robert C. Turner, and Jack Wentworth of the School of Business faculty.

ble to that of the past and that to an increasingly dependent on imported oil is dangerous to our national security and economic welfare.

The inflation induced by shortages of petroleum and petroleum-based materials was heightened by shortages of other commodities, including agricultural products, which were affected by crop failures as well as rising costs. As the inflation gained momentum, the Federal Reserve attempted to check it with a tight money policy. Interest rates rose dramatically and funds flowed away from the thrift institutions which finance most residential construction. The high interest rates, coupled with the general loss of public confidence in the nation's future, led to a drop in security prices for bonds and common stocks. This, in turn, caused business firms to turn increasingly to banks, rather than to capital markets,

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ded funds, causing short-term rates to soar unprecedented levels.

Meanwhile, the high rate of inflation created an illusion of prosperity. Stated corporate profits rose sharply, but a substantial percentage (as high as 54 percent in the third quarter 1974) of aftertax corporate profits are simply the result of unearned profits from inventory turnover at rising prices (in technical terms, the "Inventory Valuation Adjustment"). Double-digit inflation coupled with scarcities led many companies to try to build up their inventories to beat the inflation. The inflation also generated higher money incomes for many employed persons, but prices rose even faster, so consumers were forced, sooner or later, to cut their real spending. Meanwhile, the unemployment rate was creeping upward. In the fourth quarter of 1974, the day of reckoning arrived. Goods, especially at the retail level, were coming in the back door faster than they were going out the front door. Inventory/sales ratios soared. Automobile sales dropped, due to uncertainties about the gasoline situation and a sharp increase in prices. Residential construction plummeted, squeezed by unavailability of mortgage funds, high mortgage rates, and high costs. Business firms which had ambitious plans for capital expansion saw market shortages suddenly become market surpluses and took a second look at their plant and equipment expenditure plans.

Meanwhile, the federal government was slow to recognize the emerging recessionary situation. "Fighting inflation" was the name of the game until late in the fall. Not until after the end of the year did the administration do a 180 degree turnaround and start to fight recession.

Now, the turnaround has occurred. The rate of inflation has slowed, at least temporarily. However, fear of fueling the fires of inflation has caused some public officials, especially in the Federal Reserve, to refrain from going as far as fighting recession as many believe would be

desirable. Nevertheless, the antirecession program is substantial. The federal deficit in fiscal 1976 will be \$70 billion at a minimum, and, if recovery does not get under way soon and if new antirecession programs are enacted, it could approach \$100 billion.

It is our collective judgment that the recession will bottom out in the current (second) quarter of 1975. Indeed, our forecast shows a small rise in real GNP in the second quarter, but this small rise is well within the inevitable margin of forecasting error. Our main reason for expecting the recession to bottom out before midyear is a reduction in the massive rate of inventory liquidation that occurred in the first quarter. Most sectors of spending, except government purchases of goods and services (GPGS), are not expected to rise significantly, and some, notably automobiles, will go even lower.

By midyear, the inventory adjustment should be nearly completed, except, perhaps, in automobiles. Industrial production should start to rise again. Some categories of spending should show signs of responding to the tax rebate and tax cut stimuli, especially consumer spending for goods other than automobiles, and residential construction. Unemployment will remain high, however, because business firms can expand output and sales in the early stages of recovery without adding new people to the payroll. The inflation rate in the third quarter should be of modest proportions, compared with last year, because productivity gains are normally large in the early stages of a recovery.

The fourth quarter should see a satisfactory further advance *if* the Federal Reserve does not tighten the monetary screws unduly, *if* the 1976 automobile models appeal to the buying public, and *if* no disruptive international event upsets the applecart. We feel moderately optimistic about the first potentiality; after all, there will be an election in 1976. We also feel slightly optimistic on the second point; Detroit will certainly make every effort to entice

Forecasted Gross National Product by Sector
(All dollar figures in billions at seasonally adjusted annual rates*)

	1975				Year
	Q1†	Q2	Q3	Q4	
Government purchases of goods and services	331.6	340.9	349.7	362.7	346.0
Federal	126.5	129.9	129.7	132.7	129.0
Defense	84.7	86.0	85.0	86.7	85.0
Other	41.8	43.9	44.7	46.0	44.0
State and local	205.1	211.0	220.0	230.0	216.0
Gross private domestic investment	163.1	173.9	191.0	207.5	183.0
Business fixed investment	146.9	147.9	150.0	155.8	150.0
Residential structures	35.3	36.0	38.5	45.7	38.0
Inventory investment	-19.2	-10.0	2.5	6.0	-5.0
Net exports	9.3	3.6	4.4	1.0	4.0
Personal consumption expenditures	913.2	926.8	949.9	983.4	943.0
Automobiles	46.8	40.8	41.9	46.4	44.0
Other	866.4	886.0	908.0	937.0	899.0
Gross national product	1,417.1	1,445.2	1,495.0	1,554.6	1,478.0
Annual rate of increase	-3.8%	7.9%	13.8%	15.9%	5.0%
Implicit price deflator	181.6	184.7	187.9	191.7	186.0
Annual rate of increase	8.5%	6.7%	6.9%	8.0%	-9.0%
Gross national product (1958 \$)	780.2	782.5	795.6	811.0	792.0
Annual rate of increase	-11.3%	1.2%	6.7%	7.7%	-3.0%

*Details may not add to totals due to rounding.

†Preliminary Department of Commerce estimate as of May 18, 1975.

#Percent change from average for 1974, not average of quarterly percent changes.

buyers back into the automobile market, and sales can run below the normal scrappage rate for only so long. With respect to the third, we have no basis for optimism or pessimism.

Our forecast is shown in the accompanying table. It should be noted that, even with the fairly brisk recovery predicted for the second half of the year, real GNP in the fourth quarter of 1975 will still be below the third quarter of 1974 and substantially below the last pre-recession quarter, the fourth quarter of 1973. Unemployment will therefore continue to be high, but the momentum will effect a further recovery in 1976. We do not attempt, in this outlook, to forecast 1976, but, with our three "ifs," and assuming that Congress enacts further tax legislation to continue the fiscal

stimulus which basically expires on December 31, 1975, a continued strong recovery in 1976 seems probable.

The "worm in the apple" is the prospect that a strong recovery will bring with it a resumption of virulent inflation. It will take extremely skillful management of monetary and fiscal policy and good luck in foreign affairs, to bring off a steady, sustained recovery without serious inflation. Again, we do not attempt to forecast 1976, but as of now, on the inflation front, we are inclined to be pessimistic.

Following is an analysis of the economic factors at work in each of the major sectors of GNP.

VERNMENT
RCHASES OF
ODS & SERVICES



o facts about government expenditures are
erally not recognized by many people. First,
he federal budget, purchases of goods and
ices account for well under half of total
enditures—38 percent in the first quarter
5. (This figure follows the Department of
mmerce's practice of excluding net interest
d by the government from purchases of
ds and services. If net interest is included,
amount would be 44 percent.)

The balance of federal expenditures is trans-
payments of various kinds, that is, expendi-
es for which no goods or services are
dered in return. Taxes (or debt receipts) are
ected from some people and given to others
pend. Examples are social security benefits,
lic assistance, hospital and medical insur-
e benefits, and grants to state and local
ernments. Federal purchases of goods and
ices, which are the portion of the output of
United States economy consumed directly
the federal government, are only 9 percent
GNP. Further, two-thirds of this 9 percent is
national defense; nondefense purchases
ount for only 3 percent of GNP.

The second frequently overlooked fact is
t state and local government purchases of
ds and services far exceed federal GPGS, by
percent. Forecasting total government pur-
ses of goods and services, then, hinges
ely on two items—the defense program and
e and local government programs.

State and local expenditures cannot be
ycast by examining the budgets of individual
ernment units. There are simply too many of
m, and their budgets are not generally
lable. Fortunately, the progression of
enditures for state and local governments is
iciently steady that a trend analysis usually
ds fairly reliable figures. However, a trend

analysis has to be modified to allow for
legislative lags in adjusting budgets to inflation,
for changes in interest rates, for tax changes,
and for other changes, such as declining school
enrollments, which can affect the total.

Our forecast of last November was very
close, as indicated by the following:

Billions of dollars, annual rates

	1974-Q4	1975-Q1
Forecast	199.3	205.1
Actual	200.5	205.1

Nevertheless, we are inclined to raise moder-
ately our previous forecasts for the remainder
of the year. The 1974 inflation is being
reflected in revenues, especially sales and in-
come tax revenues. Many governments, state
governments in particular, are in a position to
increase appropriations to match the inflation
in program costs, and thus partially relieve the
squeeze which inflation and earlier fixed appro-
priations imposed on state and local agencies.
Further, a moderate decline in interest rates has
brought some governmental units back into the
money markets for funds.

National defense purchases of goods and
services in the first quarter of 1975 (\$84.7
billion annual rate) were even higher than we
projected (\$82.6 billion) or that projected by
President Gerald Ford in his budget submitted
in January 1975 (\$81.0 billion). The reasons
for this excess are not entirely clear. About all
we can conclude is that the Defense Depart-
ment, which operates to a considerable extent
on multi-year appropriations, is pushing ahead
with its procurement programs faster than
either we or President Ford anticipated.

What will happen in the second half of
calendar 1975 depends in large part on what
Congress does to the defense budget submitted
by the President. Judging from congressional
committee actions to date, some program cuts
are likely. Nevertheless, Congress will recognize
in its appropriations the inflation-increased
costs of continuing programs. Further, it is our

guess that the President's proposal, incorporated in the budget, to hold the pay raise of federal government personnel to 5 percent, rather than the scheduled cost-of-living increase of about 9 percent, will not be approved by Congress. (We are also guessing that Congress will not go along with the recommended 5 percent ceiling on increases in social security benefits, but this does not affect federal GPGS; it is a transfer payment.)

Nondefense federal GPGS will also rise somewhat more than we anticipated last fall. Congress is under pressure to "do something" to relieve unemployment, in addition to the tax actions already taken. Many proposals are in the mill. We anticipated such actions last November, but events in the meantime require some upward revisions of our earlier figures.

BUSINESS FIXED INVESTMENT



Much in current business news brings some optimism to our forecast, but there is at least one nagging weakness. Real capital spending has been falling and, thus, we have not been adding significantly to our stock of real capital. Real capital spending in the current recession is not unlike that during other post-World War II recessions. Because the lead times in capital construction are long, in the early phase of a recession, real capital spending remains up, but eventually it falls. It usually does not increase again until after the upturn in the economy has clearly arrived.

While capital spending seems to be following a familiar pattern, it is, nevertheless, a disturbing situation. We greatly need to add to our capital stock if we are to increase productivity. Some of the current capital spending is simply going to replace worn out plant and equipment. Some of it meets the needs of a still growing population. Some of it is required to

meet environmental standards. But we must more than just meet these needs.

If the productivity of the growing labor force is to be maintained, it must be equipped with capital. (Indeed, the availability of capital may be a prerequisite of a return to full employment.) But what we really need is for the capital stock to grow faster than the labor force, in order to expand the capacity for production. Increased capacity is a means of dampening inflationary pressures that may appear as we approach full employment. Increased capacity can also help avoid shortages and bottlenecks, if the capital is allocated to appropriate industries. Normally, the market would allocate the capital in the right direction.

Though the need for more rapid capital accumulation is apparent, it does not seem we will get it during the remainder of this year. Last fall, the firms covered by the McGraw-Hill Publishing Company's survey of plans to spend for new plant and equipment reported that they expected to increase their current dollar spending in 1975 by 12 percent. This spring the survey shows that spending is expected to increase by only 5 percent. Since the prices of capital goods are expected to rise by substantially more than 5 percent, real spending will continue to decline. The current dollar capital spending by the firms and nonprofit organizations not covered by the survey has been falling for three quarters, and there is no reason to expect it to take up the slack.

The downward revision in spending plans seems to be substantiated by other data. During the first quarter the increase in contracts and new orders has been low, and there have been some cancellations, which reduced the increase in orders. Unfilled orders are declining and thus backlogs are down. The upsurge in hard good orders in April is not likely to have much effect on actual expenditures in 1975. Considerable unused capacity exists. Long-term interest rates are down somewhat, but the new lower rates have not been in effect long enough

have much influence and will not until, perhaps, the last quarter of the year.

Our forecast shows current dollar spending going mildly in the third quarter and a little more briskly in the fourth. The increase from the first to the fourth quarter is projected at 6 percent. Since prices will have increased more mildly, our forecast shows a decline in real spending during 1975.

As usual, the picture by industry is mixed. Steel, paper, and chemicals, according to the McGraw-Hill survey, will show rather substantial increases. However, whether there will be enough expansion in these industries to prevent the reappearance of shortages is uncertain. Communications and airlines spending is expected to be down. Transportation and gas utilities are expected to be up. Electrical utilities are expected to remain static.

As the economy recovers, real capital spending should, after a lag, turn up. How rapidly it will increase will depend upon capacity utilization rates, interest rates, and expectations. Since we are not prepared to present a 1976 forecast at this time, our initial thought is that businesses will be cautious until they have some better feel for future monetary and fiscal policies and until some of the uncertainties about government energy policy are resolved.

RESIDENTIAL CONSTRUCTION



Residential housing has been hit harder by the current recession than any other sector of the economy. Housing starts have declined sharply. In 1974, construction (especially of apartments and condominiums) continued long after tight money, coupled with high prices, induced a drop in demand. Consequently, we started 1975 with an inventory of about half a million unsold single and multi-family dwelling units. The recent tax incentives for new home buyers have met with only limited success in reducing

this overhang, and Congress is currently examining other measures to assist the housing sector, including federal mortgage interest subsidies to middle-income families.

The value of residential construction (including additions and alterations and non-housekeeping units) reached a five year low of \$35.3 billion during the first quarter of 1975 (at seasonally adjusted annual rates). This was 27 percent less than the \$48.4 billion (annual rate) registered for the first quarter a year earlier. The real level of residential housing in the first quarter of 1975 was at an eight year low for the already depressed residential construction sector—not since 1967 has the level of housing activity been so sluggish. A combination of consumer apathy, declining real wage income, and a continuation of the worst recession this country has seen in 40 years has kept housing in a slack demand situation.

Spending for repair, additions and alterations to existing units has held up much better than spending for new housing units. Many homeowners who have been deterred from buying new housing units have, instead, put money into improving old houses. Consequently, the percentage decline in the constant dollar GNP residential structures component has been less than the decline in new housing starts.

The most encouraging current development for housing is the increase in savings received by thrift institutions. The first quarter of 1975 saw the most rapid surge of saving inflows in the history of these institutions, as the result of the sharp decline in short-term interest rates. Net savings received by savings and loan associations in the first quarter of 1975 amounted to almost \$10 billion, the best inflow ever for a first quarter interval and about double the volume of a year ago.

The large net inflows of deposits have not yet triggered a housing recovery, since the thrift institutions have used some of these funds to improve their liquidity positions and to pay off some of their borrowings from the Federal

Home Loan Bank System. In addition, much of these savings flows have been in the form of big bulk additions to passbook savings accounts, which are considered "hot money" by many thrift managers—that is, money that will be immediately taken out of these accounts if short-term interest rates rise.

Although mortgage interest rates (together with other long-term rates) have declined only modestly, increased availability of funds should improve the outlook for residential housing. If long-term interest rates remain constant or decline somewhat further and if the rate of inflation in construction costs eases, as seem probable, the residential construction sector should contribute some strength to the economy later this year. We expect housing starts to bottom out in the first half of the year and edge higher to a seasonally adjusted annual rate of 1.5 million units by year end. We do not expect a return to the two-million-plus levels of 1972, however, until well into 1976.

AUTOMOBILES



There is little need to dwell on what has been happening in the automobile industry since the last forecast. The media have been filled with stories about automobile sales, automobile production, automobile employment layoffs, foreign car sales vs. domestic car sales, and so forth. Little of this news has been encouraging to the industry.

Reviewing our November 1974 forecast, the slump predicted for the automobile industry was about of the magnitude anticipated. On a quarter-by-quarter basis, the fourth quarter of 1974 was slightly below the forecast, and the first quarter of 1975 was above the forecast. The latter was no doubt due to the rebates offered during the first quarter.

As we look at the balance of 1975, there is still little reason to be optimistic. Although

economists differ as to the time of the turn around, most do not see a dramatic change at least until the fourth quarter. Domestic new car sales declined 26 percent in April, from April 1974, which itself was no great sales month. Optimistic industry economists had hoped for the normal spring pickup of auto sales would start in April. Due to a dramatic 26 percent increase in foreign car sales, total new car sales for April were down only 19 percent from year ago. Thus, except for foreign cars, the spring "lift" has not arrived, and, at the time of writing, there are no signs that it came in May.

There is little question that general economic conditions, along with the prices of new automobiles, play important roles in the current status of the automobile industry. However, there may be a temptation to place too much weight on these factors. The real cause of the industry's problems can be centered around two words: uncertainty and confusion on the part of consumers, who are reluctant to buy new cars at prices they consider to be high. An easy alternative (at least for the short run) is to make the old car last another year or two. The purchase of an automobile can often be postponed, and that is just what consumers are doing.

Why is there confusion and uncertainty in the consumer's mind? Consider these influences to which the consumer has been exposed during recent weeks:

The large or standard sized car that we know today may soon be a thing of the past. One recent executive stated that today's standard sized car will be obsolete by 1980.

Numerous domestically-produced small cars are available, but many of them are too small for a family and are high priced. Moreover, because many of them are heavier than the same size foreign cars, they yield poorer gasoline mileage.

Cadillac, the standard of the world, has unveiled the new Seville, the international sized car, which is smaller and drastically altered in design from the conventional Cadillac of the past. Will other manufacturers follow suit in a year or two?

The chairman of the board of General Motors announced a multi-billion dollar project to develop

new car lines to meet the needs of the consumer. With a few exceptions, such as the Seville, it may take two or three years before they appear on dealer lots.

We are told repeatedly that there will be another energy (gasoline) shortage unless something is done. There is plenty of gasoline now. What *should* we expect?

Congress may pass a law taxing high gas-consuming cars—or there may be a heavy excise tax on large cars.

The harness that was mandatory on 1974 cars, popular with many people, is no longer required. The harness is still there, but you can now operate a car without using it, if you can stand to listen to a buzzer for a while.)

Many of the 1975 cars have a catalytic converter, which adds significantly to the price of the car. However, some environmentalists are saying they will substitute one kind of pollution for another. All the 1976 and 1977 models have catalytic converters.

Manufacturers are under great pressure to develop a more efficient engine. Can we expect a breakthrough some time in the future? If so, when?

Pollution controls may be eased, which will permit better performance.

If consumers listen to all of these signals, they will become more confused, more uncertain. The prudent action, then, becomes one of waiting and seeing. That is what they are doing, and the general economy could turn around tomorrow and the automobile industry would still be a lagging industry. It could well be the industry that holds the economy back from a rapid recovery.

Sales of parts and accessories will, in part, offset the sluggishness in new car sales. As the average age of automobiles on the road gets higher, more batteries, tires, and other parts are inevitably needed.

On the positive side, automobile demand is certainly being pent-up. Some cars can be kept off the scrap heap only for a limited period of time. Once a clear signal is received as to the direction the industry will take with regard to such matters as car size, performance and efficiency and where the government is going with controls and taxes, then the consumer could react suddenly, and automobile sales could take

off like a rocket. However, we do not see this happening this year.

Therefore, our November forecast of about a 13 percent drop in personal consumption expenditures for autos and parts still looks valid. We have made small adjustments on a quarter-by-quarter basis, but the basic trend is as forecast in November.

OTHER PERSONAL CONSUMPTION EXPENDITURES



Declining consumer spending has been the force that converted an oil-induced minor recession early in 1974 into a major economic decline late in the year and in the early part of this year. By the same token, consumer spending holds the key to the future.

Although total personal aftertax income in current dollar terms increased in every quarter throughout this period, prices rose even faster, so that consumer real incomes declined. One escape from this squeeze was to go further into debt, but the uncertainties of the developing economic decline caused consumers to be cautious on this score. Although consumer installment repayments on debts acquired many months ago have been essentially constant since last summer, new credit extended (seasonally adjusted) has declined significantly. The other escape from the squeeze was simply to buy less in physical units, and this is what consumers have done.

Certain consumer expenditures are relatively uncontrollable in the short run—rent, utility bills, medical bills, and certain transportation costs, for example. Spending for services, in constant dollar units, has therefore declined relatively little. The cut has come in spending for goods, notably durable goods, such as (in addition to automobiles) appliances, furniture, and television sets, but the cut has also included many nondurable goods, such as clothing.

The keys to consumer spending in the remainder of the year are chiefly three: Prices of consumer goods, consumer income, and consumer attitudes about their future security. All three offer some basis for modest optimism. The rate of inflation has lessened substantially—though the encouraging increase of only 0.3 percent in the Consumer Price Index in March was followed by a 0.6 percent increase in April.

Consumer incomes will be augmented substantially by tax rebates, and the reduction in tax withholding. Consumers will respond to this increase in aftertax income, but if past experience is any guide, they will respond slowly. Not until they see that their cash position is clearly improved will they loosen their purse strings.

According to consumer surveys, there are early signs of improvement in consumer attitudes about their economic future. The chief cause of this improvement is probably a growing conviction that the federal government is, at long last, moving to turn the recession around. The rise in the stock market has helped to lift the spirits of consumers who own securities.

On the other hand, even if the upturn that we predict in the last half of the year occurs on schedule, the unemployment rate will not decline appreciably. The unemployment rate is a lagging series; business firms, in the early stages of a recovery, can accommodate to an increase in production without a corresponding increase in the number of persons employed. Further, discouraged workers who dropped out of the labor force earlier will reenter when jobs begin to become available again. We expect, however, that continued high unemployment will be a negative influence on consumer sentiment through the remainder of the year.

Our forecast, therefore, is for essentially no improvement in constant dollar consumer expenditures for goods and services (excluding automobiles) in the second quarter. The third quarter should see the beginning of some improvement, but not until the fourth quarter

will consumers gain enough confidence (cash) to make a significant contribution to recovery from the recession.

INVENTORIES

Inventory change is currently one of the most elusive sectors of the economy to predict. A year ago, firms were eagerly building up inventories of all sorts to meet expected higher sales and to beat double-digit rates of inflation. At the present time the exact opposite is happening; firms are frantically attempting to scale back their inventories in line with sharply lower final sales and to unload an unintended inventory buildup that resulted from previous overestimates of sales. According to preliminary data, inventory change went from plus \$37 billion (annual rate) in 1974:4 to minus \$37 billion (annual rate) in 1975:1—a \$74 billion turnaround, which is the biggest swing since World War II.

Even with the recent sharp inventory cut-off, unwanted inventories are still of fairly large magnitude in relation to current sales levels, and the primary problem in forecasting inventories is to determine whether future corrections in inventory/sales ratios will be made by further cutbacks in production or through improved sales. The first quarter inventory runoff was concentrated almost entirely in the trade sector, with about half of the inventory decrease coming at the retail level. Much of this activity was concentrated in auto dealers' inventories for orders to the big three auto producers. Cash cut and cash rebate programs were instituted to unload dealer inventories.

During much of 1974, wholesale distributors had accumulated inventories out of a shortage of shortages, and the sudden decline of demand caught them with unwanted stocks of finished commodities. The expected bottoming out of the economy sometime later this year should cut back inventories even more,

less sales turn sharply upward, the process of bringing inventories back down to optimal levels will be far from complete. A good bit of the inventory problem for the U.S. rests with the automobile industry, and inventories will remain high as long as unwanted automobiles remain on car dealers' lots. Once automobile sales begin to rise, new orders will begin coming in and unwanted inventories will return to more efficient levels.

It is our judgment that the inventory liquidation will continue, though at a somewhat reduced rate, through the second quarter. We expect a small inventory rise in the third quarter, as sales perk up a bit. In the fourth quarter, if sales rise further (as we expect and as is reflected in our total forecast), inventory levels that were brought back into line by the level of sales during the first half of the year will prove to be insufficient for the then current level of sales. A significant buildup will then become necessary. In effect, what we are forecasting is a textbook example of the inventory cycle that we have seen in several previous recessions.

EXPORTS



While the domestic economy has been experiencing the adverse effects of the recession, many exporting industries have enjoyed unprecedented growth in overseas sales. U.S. merchandise exports grew by nearly 40 percent in 1974, over the previous year, and the strength of export demand has continued into 1975. Overall, the export boom of \$98 billion in 1974 nearly matched the large increase in value of imports (\$100 billion), caused largely by the sharp increase in the price of oil imports. With the imposition of the dollar-per-barrel tariff on February 1, followed by a similar increase on June 1, oil imports are expected to decline somewhat, and the prospects of a trade surplus in 1975 seem better now than they did late last year.

The export boom can be explained in part by the price advantage given to U.S. goods by the dollar devaluations of 1971 and 1973. Agricultural exports continue to dominate, but crop surpluses in Australia and other countries will reduce the demand for U.S. commodities.

American exports have also been stimulated since they have carried generally lower price increases than competing goods in major overseas markets. Only West Germany and the Netherlands have had lower rates of inflation than the United States during the past twelve months, and in several countries, notably Great Britain, Japan, and Italy, inflation has been substantially higher. At the same time, demand for imports in many of these export markets has been stronger than U.S. demand for imports, as indicated by the relatively milder declines in GNP overseas. Many West European countries acted more quickly and drastically than the United States in restricting oil imports, and thus avoided some of the more serious problems that their dependence on Mideast oil would have caused.

The trade outlook for 1975 depends in no small degree upon the world petroleum situation. Assuming stability in oil prices, we can expect a lessening of the main pressure that created a trade deficit of \$2 billion in 1974. It is difficult to assess the impact of the oil import tariff, but the early February increase appears to be contributing substantially to a trade surplus, as is indicated by the \$9.3 billion annual rate surplus in the second quarter.

However, there are some countervailing influences. When the U.S. economy recovers from the recession, the demand for imports will inevitably grow. Also, the federal budgetary decision to reduce export promotion activities may dampen the growth in exports. Looking further ahead, if a resurgence of high rates of inflation accompanies economic recovery, the current price advantage enjoyed by U.S. exporters could be lost.

We therefore project a modest but fairly stable export surplus during the second and

third quarters of 1975. In the fourth quarter, however, as domestic business activity recovers, and as prices began to rise again, we foresee only a negligible export surplus. If a real boom gets underway in this country (which we do not forecast), our fourth quarter projection would prove high; that is, the balance of trade could well turn negative.

INTEREST RATES, PRICES, AND MONEY



Most economic observers agree that a further decline in interest rates would be beneficial, and some economists contend that the housing industry can be restored to health only after a further drop in rates on urban residential mortgages.

As we noted in the Outlook edition six months ago, short-term rates of interest had clearly started down by August and September 1974, and they continued a rather precipitate decline late in the year, before leveling off in late February and early March of this year. Long-term rates moved in the same direction, after a lag of two months or so, and by late February of this year it seemed that the bond market might be due for a continued rally. Hope for a really significant further decline in bond and mortgage rates lessened, however, as the market for long-term issues turned sour in early March.

The upturn in yields can be attributed to three basic causes. Most important, probably, was the emerging consensus that U.S. Treasury deficits for fiscal 1975, and especially for fiscal 1976, would be far greater than anyone had previously imagined. Moreover, as interest rates were dropping during the late fall and winter months, corporate treasurers came to the long-term market for borrowings that had been postponed since before the peak of rates in 1974. Finally, there was continuing uncertainty about the future course of monetary policy, as Federal Reserve officials appeared resistant to

demands of many congressmen for a quick return to easy money.

The trend of interest rates over the next few months is difficult to forecast because so much turns on the decisions of a few top government officials. Specifically, will the Treasury choose to finance the deficit by tailoring its issues to suit the nonbank public—wealthy individuals, trust funds, pension funds, nonbank intermediaries, and the like? Or will Secretary P. Simon and his colleagues opt for selling short-term instruments more likely to be purchased by commercial banks? The extent to which towering deficits are monetized is crucial in determining the rate of growth of the money supply and, in the short run, rates of interest.

In addition to the question of debt management, there is the problem of appropriate monetary management by the central bank. Well into the current recession, Federal Reserve officials were reluctant to ease last year's severe monetary constraints to any substantial degree. Beginning in late January of this year, however, there was, until early May, a substantial run-up in the money stock narrowly defined (M_1 —demand deposits and currency outstanding in commercial banks) on an annual rate basis in excess of 10 percent.

The Federal Reserve will be under continuing pressure from Congress to follow an extremely easy monetary policy in order to keep interest rates from rising. A central bank policy aimed at keeping rates down would be successful in the short run, but in the long run inflationary fires would certainly be rekindled by money stock increases at annual rates significantly in excess of 5 to 7½ percent, which is the policy objective recently announced by Chairman Arthur F. Burns.

We anticipate that, despite considerable fluctuations, neither short- nor long-term interest rates will rise much during the third quarter of calendar 1975. But beginning in the fourth quarter, a rebounding economy may well lead to increases in the demand for funds that, coupled with inexorable Treasury requirements, will cause rates to rise substantially.



The Indiana Economy

Introduction by Richard L. Pfister and Morton J. Marcus

The old pattern of Indiana's highly sensitive reaction to national economic changes has shown up clearly in the last few months. In the two Outlook editions of 1974, we noted that the current business decline did not, in its early stages, cause the usual greater decline in Indiana's economic activity. The special circumstances causing this unexpected development have now largely disappeared. In March 1975, Indiana's unemployment rate was 9.3 percent, somewhat above the national rate of 8.7 percent (both seasonally adjusted).

Employment in primary metals has declined in recent months, but the decline is still not as sharp as has been typical in previous recessions. Employment in other durable manufactures has dropped sharply from year-ago levels, as is expected in a recession. Employment in non-durable manufactures has declined less sharply, while nonmanufacturing employment has declined very little from year-ago levels. The rate of decline in employment has slackened, which gives rise to the belief that the bottom of the recession is near, if not already reached.

Recovery in Indiana will probably be slower than for the nation as a whole. The rather poor outlook for capital investment and automobiles during the early months of recovery will keep some of the state's major industries in the doldrums. If consumer confidence picks up, the state's major producers of consumer durables will benefit. Farm income could decline again if the expected large harvests cause price decreases that are proportionately greater than quantity increases. Net farm income will be

adversely affected if prices paid by farmers continue to rise, as expected.

Reports from individual metropolitan areas show the substantial declines in business activity usually associated with a recession. Since some areas have been harder hit than others, the forecasters' optimism—or pessimism—varies with regional circumstances. The possibility of major resource shifts and the uncertainties of recovery lead several area reporters to be pessimistic; they suggest that their local recoveries will lag behind national recovery.

GARY-HAMMOND-EAST CHICAGO (Calumet Area)

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From June 1974 to the present, over 10,000 persons left the northern region labor force (discouraged workers), and almost 7,000 were furloughed. The drop in nondurable employment was over 11 percent, in steel and fabricating it was over 9 percent, and in the wholesale and retail sector, employment dropped over 4 percent. The loss in government jobs was about 3 percent.

For the first time, the decline in employment either equalled or exceeded the decline in output (in past recessions, local employment

declined less than production). This does not augur well for a coming upturn, because firms may be adjusting to lower output. Recovery may be sluggish, with few visible signs of buoyancy until the first quarter of 1976; we predict a flat recovery curve for this region.

The current recession has been tagged as the most widely diffused downturn since the baleful 1930s. Regardless of whether this is a correct assessment, we thought it advisable to probe the pricing behavior of firms in the northern Indiana region. We obtained a probability sample of 95 retail and other firms, ranging from small outlets with annual sales below \$100,000 to national giants with annual sales of several million. We obtained data on the rise or fall in their average prices, the proportionate rise or fall in sales, and measurements of numerous other economic variables. (p14-1)

Economic theory (and common sense) suggests that firms whose sales decline respond by dropping their prices more—or raising them proportionately less—than firms whose sales are not much affected by a recession. Theory also suggests that larger firms with national financial resources, who are often local quasi-monopolists, tend to resist price reductions, whereas smaller and financially weaker firms must unload excess inventory as a consequence of liquidity pressures, even if losses are sustained.

Our statistical analyses strongly confirmed such behavior, as exemplified in the following (regression) equation:

$$\begin{aligned} \text{Percent change in price} = & \\ & .213179 \times \text{Percent change in sales} \\ & + .10154 \times \text{Firm size (measured in} \\ & \text{millions of dollars of annual sales).} \end{aligned}$$

Each term in this equation is statistically highly significant (the R^2 is also significant). Our research indicates that, other things being equal, an average small store will respond to a 10 percent drop in sales with an average overall price reduction of more than 2 percent, but a firm with annual sales exceeding \$20 million may suffer the reduction in output rather than

reduce prices. (These results can be obtained by substituting the aforementioned figures in the equation.)

We further tested whether the foregoing basic pricing behavior would be affected by the location of the stores (low income or high income neighborhoods), or by other socioeconomic factors. Our test indicated minimal significance of other variables.

We also examined the supply side—namely, whether the pricing behavior of firms responded primarily to supply costs (economists call this full-cost pricing). We found that increases in supply prices—for example, food—as opposed to nonfoods, durables as opposed to other goods—significantly contributed to changes in retail prices. However, the overall explanatory power of our aforementioned equation has not been approximated by any other combination of variables.

What all this means is that in spite of the misgivings of many, both in the press and the profession, the overall validity of traditional economic doctrine can be confirmed, during the current recession, in this limited experiment. If one were to venture a guess as to the immediate policy implications, one might suggest that the best current policy is inaction at the macro level, but stimulation of competitive forces in both the product and factor markets such as labor, agriculture and energy.

Moreover, downward price flexibility is often difficult to detect and is not adequately reflected in the official price level index. Several years ago, Richard D. Heflebower said that in recessions, the margin between high turnover, low priced merchandise (ground beef) and luxury or high cost goods (special cut of beef), tends to narrow. That is, apparently merchants reduce markups on items previously priced according to what the traffic would bear. The official price index is heavily biased in favor of standard items bought by "standard" families and thus tends to overstate inflation.

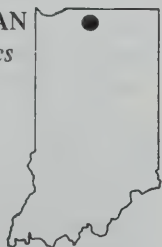
Heflebower's hypothesis was tested with a large and varied sample drawn from our area.

the hypothesis of narrowing margins was clearly confirmed in over 60 percent of the cases, including food, autos, appliances and houses. The results were statistically significant; the narrowing margins are probably due to the recession. The findings also suggest that the brunt of inflation is borne by lower-middle income families, who tend to buy goods at the lower end of the price spectrum.

The author wishes to thank his research assistant, Johnulos.

SOUTH BEND-ELKHART

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When, when will the turn be? In quarter two or quarter three? These are the focal questions for the economy on the national, state, and regional levels. The timing of the upward turn is not, of course, coincident on the three levels of the economic hierarchy. For the South Bend-Elkhart area, it looks as if the upturn will come in quarter two.

Why? Because, out of fifteen indicators currently used to describe economic performance in the area, eleven already show turns toward recovery, either by markedly reduced rates of contraction in activity or by actual increases in activity. However, employment in manufacturing dropped 7 percent between November 1974 and February 1975. In non-manufacturing, there was little change during that period. The comparable changes were 3 percent and 2 percent contractions, respectively, between August 1974 and November 1974, for the South Bend SMSA (SBSMSA). Seasonally adjusted unemployment increased 35 percent, from 5.2 to 7 percent for the SBSMSA

from November 1974 to February 1975, compared to 27 percent (4.1 to 5.2 percent) from August to November 1974.

The unadjusted unemployment in Elkhart advanced 22 percent, to 12.2 percent in February 1975, with February's unadjusted figure an improvement from January's 14 percent unemployment. This favorable change was greater than the change during the first two months of 1974. These regional employment and unemployment changes developed while the national economy's manufacturing employment (seasonally adjusted) declined 2 percent from August to November 1974, and 7 percent from November to February 1975. Unemployment nationwide increased 22 percent from August to November 1974, and 24 percent from November to February (both figures seasonally adjusted). These were lesser rates of increase than those at the local level.

South Bend's unemployment, which was 8.2 percent in March, apparently is following the national trend. However, Elkhart's unemployment remains significantly above it, and the area reflects continued disappointing labor conditions. This negative situation is the opposite of the forecast suggested by the production, sales, and debits statistics for the area. The inverse relationship between employment and unemployment, retail commercial, and actual production activity can no doubt be attributed to lag relationships.

Looking at local economic activity from nonlabor indicators, much more favorable conditions seem evident, and herein lies the support for the projected turning point in quarter two and not in three. Industrial electricity sales in Elkhart, for example, increased 2 percent from November 1974 to February 1975, hitting a record use in January. In the previous quarter, however, such sales had contracted 5 percent. South Bend's electricity use changed somewhat differently, having contracted 2.5 percent over the August-November period. St. Joseph County's industrial natural gas sales increased 14 percent from November 1974 to February

1975, against a 10 percent decline from August to November 1974.

These changes suggest a mixed production picture. However, coupled with the changes in bank debits, they suggest a turning point in quarter two, since the contraction is decelerating substantially. Elkhart's debits declined 3 percent from November 1974 to February 1975, compared to 6 percent from August to November 1974. South Bend's debits declined 2 percent, compared to 9 percent for the corresponding periods.

Of course, debits reflect nonproduct activity as well as production and cannot be used directly as correlates to production. However, whether the debit changes reflect retail sales or purchase of production materials, either activity is essentially expansionary, allowing for lag. More direct indications of turning-point conditions (the liquidation of inventories nationwide and some increased housing activity) are evident in the SBSMSA's new passenger car and truck sales and the value of new housing permits for St. Joseph County. These figures, all seasonally adjusted, are shown below for the August-November 1974 and November 1974-February 1975 periods.

The changes reflect marked turnabouts and acceleration typical of recovery. February passenger car sales were 15 percent above January's, reflecting the effect of the rebate, but much of the increase cited in the table cannot be attributed to the auto rebate program. Yet, price softness due to inventory clearance probably accounts for the decisive change.

Percentage Changes, Sales and Housing (seasonally adjusted)

	Aug.-Nov. 1974	Nov. 1974- Feb. 1975
New passenger cars	-17	+45
New trucks	-37	+27
New housing permit values	+ 9	+36

"How fast the expansion?" is another focal question for the locale, if indeed the data

substantiate the upturn argument. Increased sales and housing permit values suggest a revival is already underway. If the rate of growth in national unemployment subsides (and the prospects are good that it will within the quarter), further increases in local employment should be minimal. Although the present level of unemployment in South Bend might continue for a month or two, chances are greater that it will start to decline, gauging from the trends in sales and production and monetary activity.

The 5 percent tax privilege on new homes (including mobile homes) and generally lowered interest rates are expected to stimulate mobile home sales and production. Retail vehicle sales appear to have recovered somewhat during the past quarter, with the crisis appearing less dismal. So it looks like a turn in quarter two in the South Bend-Elkhart area.

INDIANAPOLIS

NANCY RUFF AND DICK NYE
Indianapolis Economic Forum



The business recession has impacted the Indianapolis economy, as it has the state and the nation as a whole. This is reflected in the rate of unemployment for the Indianapolis area, which was 7.2 percent (seasonally adjusted) in March 1975, compared to a national average of 8.7 percent for the same month. It appears that curtailments have been broad-based, and no single sector has been dominant in contributing to the economic adversities. The relatively better economic climate in Indianapolis, as reflected by the unemployment rate, probably reflects the considerably improved industrial diversification that has occurred locally during the past two decades. The effect of that diversification has been to temper the

economic cycles that have occurred periodically over the past twenty years.

The transportation equipment industry, which remains the most important industry in the Indianapolis economy, has been a source of strength in the current downswing. Employment in this manufacturing sector has been reduced by about 5,000 since last fall, or 15 percent. This compares with a national average increase in employment in the industry of 14 percent in the same period. These figures suggest that the local employment curtailment in this industry has been near the national average. With the much smaller numbers involved, it is surprising that a substantially larger percentage change has not occurred, as has in Detroit and other major manufacturing centers.

A measurement of the local transportation equipment industry output, based on electric energy consumption, shows that operations in January were only 5 percent below the average of operations in 1974 and 7 percent below the annual average high reported in 1973. Additionally, the February transportation equipment output was 22 percent below the 1974 average and 30 percent below the 1973 high average, according to the Federal Reserve Board's indexes of production.

The effects of the recession on the financial community of Indianapolis have been noticeable, but substantial increases have still occurred in bank debits, and total bank deposits during 1974 rose moderately. The gains in deposits continued into the first quarter of 1975.

Time deposits in March 1975, as reported by the three major reporting banks of Indianapolis, were up 12.6 percent over the total time deposits reported in March 1974. The rate of increase in Indianapolis commercial bank time deposits during the past year was second only to the rate reported by the Chicago banks among the five major metropolitan areas of the Ninth Federal Reserve District).

The pace of increase in Indianapolis bank debits has slackened since the phenomenal increases that were reported in the last half of 1974. March debits were 18 percent greater than debits reported in the same month last year, but they have receded from the extraordinary record high of nearly \$13 billion last August.

Construction activity in Indianapolis was very strong during the first nine months of 1974, but starts on new projects decreased during the last quarter. On the whole, 1974 construction had a value of \$272.0 million, which represents an increase of 9.4 percent over 1973. This investment added 13.4 million square feet of new structures, excluding single family units, for an increase of 30.6 percent over the previous year. The strong showing in 1974 helped to cushion the economic blow which hit Indianapolis during the current recession.

Although the total figures for the year were very good, the last quarter of 1974 forecast what was ahead. During the fourth quarter, new construction had a value of \$66.8 million, but, during the same period, completed construction was valued at \$142.3 million. Except for some major new projects, like the Merchants Plaza, new construction was coming to a standstill.

This trend has been most obvious in the building of apartments. The quarterly unit start figures for the last five quarters show what has taken place:

	<i>Apartment Units Started</i>
1st quarter, 1974	1,027
2nd quarter, 1974	1,703
3rd quarter, 1974	899
4th quarter, 1974	109
1st quarter, 1975	64

Indianapolis nevertheless has an inventory of construction in progress valued at well over \$400 million, and this is down only about 5

percent as compared with last year at this time. Another optimistic sign is the starting of plans and proposals for new projects. From September 1974 to February 1975 there was little new planning activity, but in the last several weeks this has begun to change. Of course, the impact of these plans will not be felt until late this year or even this time in 1976.

Another indication of renewed construction interest has been the response to the Indianapolis Chamber of Commerce area development advertising campaign. An ad which appeared in a recent issue of *Business Week* brought in over 200 responses for information on Indianapolis. Although the economy has been hit hard by the current recession, businesses are still making plans for the future, and the Indianapolis area will be a part of many of those plans.

MUNCIE

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The year 1974 might be characterized as a "hangover" year in which economic performance fell far short of potential, as previous excesses blurred businessmen's profit perspective, impaired the vision of econometric forecasters, and bequeathed the consumer a stuporous, double-digit, inflationary headache.

When GNP took its steepest drop in sixteen years during the first quarter of 1974, recession entered largely unrecognized. Indeed, this unwelcome visitor received belated recognition only while the economy was in the throes of posting two successive quarters of increasingly steeper declines by March of 1975. Fifteen months of recession did not leave Hoosierdom unscathed, for Indiana ranks second only to Michigan among the most cyclically sensitive

states in the Union. Too, the Muncie SMSA, a major producer of machine tools and durable goods, for which demand is highly volatile obviously susceptible to the vicissitudes of business cycle.

Paradoxically, Muncie's employment picture remained quite healthy until the last quarter of 1974. In part, this can be explained as a perverse consequence of the energy crisis which depressed the transportation sector of the nation, but provided a robust stimulus to Muncie, in that Warner Gear and Muncie Chevrolet produce components for the most popular gas-saving compacts. However, as automobile sales slumped well below expectations during the fall and winter, even the inventory of compacts were found to be surfeit, and the gloom and doom associated with high unemployment again descended on Muncie.

Unemployment skyrocketed from 4.7 percent in October 1974 to 11.2 percent in mid-March of this year. Almost two-thirds of the increase in unemployment for the year ending February 1975 can be associated with the layoff in the transportation equipment sector. Warner Gear, a division of Borg-Warner Corporation, formerly Muncie's largest employer, reduced its work force by over one-third between October 1974 and April 1975.

Most of Warner Gear's machinery is old but not obsolete, by most standards. Its labor-management relations have long been strained, and one would have to be sanguine to believe that a turnaround is at hand. Future prospects for the plant are partially contingent upon achieving greater acceptance of its new T-10 five-speed transmission now in very limited production. The outlook for Muncie Chevrolet is considerably brighter, as a sprinkling of worker recalls may preface a somewhat more favorable second-half scenario for 1975.

On the credit side of the ledger, J. I. Brothers is constructing a \$6.5 million high-rise office building in the downtown area. The revitalization of this section will receive further

petus during the summer, with the commencement of construction of a mall and accompanying traffic flow changes. Ball State University will have completed a \$14 million library by autumn and has commenced construction of a new service-stores building. Ball State remains a stabilizing force in the local economy, even though it continues to experience a decline in student population. For the twelve months ending February 1975, plus checks must be given to industrial electrical firms, which were up 2.7 percent, and bank deposits, which increased 8 percent.

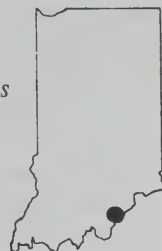
On the debit side, General Motors again postponed breaking ground for the multimillion dollar Delco battery plant to be located in Muncie's Industrial Centre. New single-family homes constructed during the July 1974 to March 1975 period declined 26 percent over the comparable 1973-74 time frame; apartment units constructed decreased 70 percent. (However, contractors report a substantial increase in home remodeling, and mortgage interest rates declined slightly in April, which should preface a turnaround in residential construction.) Automobile unit sales declined 20 percent in 1974 over the 1973 total. For the twelve months ending March 1975, deflated manufacturing payroll declined 5 percent, and deflated department store sales 4 percent, compared to the previous year.

What are the prospects for the Muncie area for the remainder of 1975? On balance, the debits appear to outweigh the credits. In general, economic activity in Muncie tends to lag the nation in cyclical upturns, with unemployment peaking and holding at relatively high levels while the national economy recovers. Assuming that the harbingers of economic recovery manifest themselves in the form of real growth for the nation in the third quarter and that the auto industry experiences a modest upturn, it appears unlikely that unemployment in Muncie will be less than 9 percent during the balance of 1975.

SOUTHEASTERN AREA

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The national economic recession did not bypass the Louisville metropolitan area, including southeastern Indiana, but the overall economic impact has been somewhat less severe than in many other areas.

Unemployment, of course, is higher than a year ago, and employment is lower throughout the five-county Louisville area. (The official Louisville SMSA has been expanded to include three Kentucky counties, plus Clark and Floyd counties in Indiana.) April employment rose by nearly 2,000 workers above the March level, but was still 14,600 below that of April 1974—a loss of jobs roughly equivalent to the area's usual employment increase in years of strong economic expansion. The unemployment rate, which was less than 4 percent a year ago, fluctuated between 5 and 6.6 percent from October to March. The rate then rose to 7.7 percent in April, as spring weather brought a rush of additional job seekers into the labor force.

Indiana residents experienced somewhat higher rates of unemployment than did the area as a whole, particularly in Floyd County, where the unemployment rate for residents reached 8 percent in March. Total employment in business establishments located in Floyd and Clark counties rose by 1,400 workers from March to April, but was still about 2,500 workers below the employment level of a year ago.

In recent months, data on unemployment claimants indicate that in Floyd and Clark counties women suffered a disproportionately high incidence of job-separation, while the incidence for non-whites was about average.

Women represent 39 percent of the local labor force, but accounted for half the weekly unemployment compensation claims; non-whites comprise 4.5 percent of the local labor force, and accounted for 4.8 percent of the claims. For the metropolitan area as a whole, however, job-separation was relatively more severe for men than for women, and was particularly severe for non-whites. The latter accounted for 12 percent of the labor force and 20 percent of the unemployment claims.

Job losses were heavily concentrated in durable goods manufacturing—particularly in areas connected with the hard-hit construction or automotive industries, such as electrical appliances, lumber and wood products, and car and truck assembly. Nondurable goods manufacturing experienced moderate employment declines, and nonmanufacturing registered gains, particularly in government employment. Federal government employment in Clark County, for example, increased as a result of the agricultural census now underway.

Since many large employers have kept long-term layoffs down by using occasional one-week layoffs, employment data do not give a very accurate picture of the area's economic slowdown.

The Chamber of Commerce's business activity indexes, shown in the following table, give further evidence of the decline in manufacturing and construction. The industrial produc-

tion index, which is based on kilowatt hours electricity used in manufacturing, and on railroad freight shipments out of Louisville, fell this March to a level below that of 1967. The March construction index was only slightly above the 1967 level.

Despite this gloomy picture, there is reason to be optimistic about future developments. For example, recalls—and scheduled future recalls—are becoming more prevalent, food prices have declined slightly, department store sales are rising moderately, and an increasing number of residential building permits have been issued. The annual influx of graduates in the job market will keep unemployment high during the coming months, but the Louisville economy should be moving upward, slowly but noticeably, sometime this fall.

EVANSVILLE

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Index of Louisville Area Business Activity
(1967 = 100, seasonally adjusted)

	<i>March 1974</i>	<i>Sept. 1974</i>	<i>March 1975</i>
Industrial production	125.6	121.7	95.8
Trade and services	120.3	124.0	120.7
Construction	137.1	135.9	102.4
Transportation	150.9	150.5	140.0
Financial	223.0	263.3	256.3
Employment	121.5	121.1	116.7
<i>Composite index</i>	<i>136.5</i>	<i>139.9</i>	<i>126.0</i>

SOURCE: Research Department, Louisville Area Chamber of Commerce.

The Evansville area economy has been stagnant since February 1974. A major strike in the local refrigeration plant curtailed the regional production and employment by about 7 percent for about four months. After the settlement of the labor dispute in June 1974, the local economy regained most of its strength in the following months, achieving 97 percent of the January 1974 level.

By November, the nationwide recession began to exert adverse impact on the regional economy. From November 1974 to February 1975, industrial production, construction, and transportation activities all suffered a setback. A sizable cutback in employment began in January 1975, as a result of large layoffs

Evansville Area Business Index

<i>Factor Indexes</i>	<i>1972</i>	<i>1973</i>	<i>1974</i>	<i>Jan. 1975</i>	<i>Feb. 1975</i>
Industrial production	123.33	132.83	126.26	121.65	117.19
Trade & services	113.93	116.75	111.88	112.14	120.91
Construction	102.24	125.56	112.64	94.12	88.49
Transportation	106.52	110.61	101.72	90.83	86.83
Finance	136.16	157.55	192.00	207.50	205.11
Employment	100.97	104.16	102.44	97.49	99.76
<i>Composite index</i>	<i>115.64</i>	<i>123.63</i>	<i>119.16</i>	<i>115.28</i>	<i>115.61</i>

for manufacturing plants and related industries. Total employment in February fell almost 10 percent from the August 1974 level. Retail and service industries did not experience much reduction in activities, since they had already been sluggish throughout 1974. The financial sector was an exception in the gloomy area economy, registering a high rate of growth in deposits and income, due to unusually strong demand for loans and due to high interest rates.

The accompanying table shows the levels of activities in the various sectors of the Evansville area from 1972 to 1974 and the first two months of 1975. The Evansville Area Business Index uses the 1967-69 period as the base period; the monthly average of these three years is treated as 100. As can be observed from changes in the composite index, the economic performance of this area reached the highest level in 1973, but dropped to 119.16 in 1974, then declined further in the first two months of 1975. The first quarter of 1975 will probably be the trough of the 1973-75 recession, for the region as well as the nation. The point of upturn is not in sight yet, according to these statistics.

Whether the labor dispute at the refrigerator plant last year will hurt the local economy is a matter of deep interest. The Evansville plant of the Whirlpool Corporation has cut about 10 percent of the number of employees by 2,900 since January 1974. Part of the reduction, of course, was cyclical in nature, but a large portion could be of long-term duration. Therefore, to maintain or even increase the employ-

ment and income in the area, the expansion of the existing firms and the in-migration of new firms are of primary importance.

A comparison of prestrike and poststrike employment and industrial production indicates that the effect of the strike was small, though not insignificant. Expansion of existing firms in a year or two might compensate for the loss of employment in the poststrike period. However, the in-migration of new firms to the area appears more important, if the area is to grow at a rapid rate.

The construction sector in the Evansville area was quite active during 1973 and the first part of 1974. In July, however, it began to dive, reflecting the national trend. From August 1974 to February 1975, construction activities were about 25 percent below the 1973 level. The high mortgage rate and the recession contributed to the depression in the housing industry.

The activities in the trade and services sector similarly reached a peak in 1973, but since then have decreased by about 5 percent. The sales of automobiles and home appliances suffered a sizable reduction from March 1974 to January 1975. In February, the sales of new cars and trucks gained about 2 percent, due to rebate programs.

During the first quarter of 1975, the Evansville economy stayed at the bottom of the recession. An upturn is nowhere in sight. Encouraging signs appear in the trade and services industries, but they by no means forecast a definite upturn. The recovery may

begin sometime between June and September. The easing of inflationary pressure and the increase in personal income will stimulate consumer spending, which will be followed by an increase in production, and, finally, by an increase in employment.

Recovery in the Evansville area will probably follow the national pattern. Though the area shares the nation's cyclical pattern of economic activities, the growth of the Evansville economy relies on several factors which are peculiar to the area. Overcoming the unfavorable image of management-labor relations is essential in attracting new firms. The elimination of the state tax on business inventories is necessary for Evansville to compete with neighboring towns in Kentucky. Improvement of the highway system will make the external markets more accessible to Evansville business firms.

TERRE HAUTE

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In general, Terre Haute has experienced an excellent year of growth. Despite the economic troubles of the rest of the state and nation, Terre Haute prospered. This was due, at least in part, to its economic base, which consists of over 100 diversified industries. Economic trouble in any one industry or area affects Terre Haute's economy only marginally, because of this diversification. This built-in insulation has resulted in the following two extremely important conditions: Loss of man-hours from strikes is far below the state and national averages, and retail sales per household are among the highest in the state and nation.

Among the outstanding developments was the widening of Fort Harrison Road on the

city's north side, which will complete a freeway lane belt around the city; a new bridge north of U.S. 63; a new library at Rose Hulman Institute of Technology; and new landscaping for the Hall and the Vigo County Courthouse.

Through 1974, the Terre Haute unemployment rate was appreciably below the national and state seasonally adjusted averages. When the national unemployment rate moved from 5.2 percent in January 1974 to 7.1 percent in December, Terre Haute's averages started at 3.8 percent and climbed to 5.8 percent for the same period. Indiana's January and December 1974 averages were 4.7 percent and 7.7 percent. As of December 1974 the total number in the labor force was 74,200.*

A high-rise housing unit for the elderly, Garfield Towers, was completed, providing 100 new units. Two additional public housing developments, Morton Court and McMillan Square, provided fifty apartment units. The construction of forty-one single-family dwellings, begun under HUD's Turnkey program. The three-year goal calls for 1022 units—500 new, 455 existing, and 67 rehabilitations.

Completion of the following structures makes 1974 an active construction year in this area: a new Kidyco Child Development Center, a new Southside Child Care Center, a new Girl Scouts regional headquarters in Fairbanks Park, a new dormitory at the Gibault School for Boys, a new "Little Girls" house at Glenn Home for orphans, and a new recreation building at the U.S. penitentiary south of Terre Haute.

New, imaginative playground equipment was placed in city and county parks. A new cabin, the first of a number of structures which will eventually be "Pioneer Village," was built in Fowler Park. A new park, Prairie Creek, is almost complete, and plans are being made for several other new parks in the area.

Facilities were constructed by four industries—Packard Shirt Manufacturing Company, Western Welding and Iron Works, Haverhill Machine Shop, and Festival Homes in near Brazil. Several other industries expanded their

ent facilities, including Terre Haute Industries, Numerical Concepts, Liquid Carbonics, Tool and Machine, and Bemis Company. y offices were built by Commercial Solvents Princeton Mining.

During the past year, Terre Haute has seen addition of new facilities by Supreme Mining, Public Service Indiana, a second store Hill Brothers Shoes, Wigwam Roller Rink, fer Distributing Co., Firestone Service ter, Midas Muffler store, and Wolfe's Auto tion.

Two new IGA Foodliners were constructed; Farm Bureau added a new building, several y grain elevators and storage facilities; three y funeral homes were built; and two new artment stores, Zayre's and a second Mart, were added.

Seven new fast-food outlets were constructed or opened, and motor lodges by ward Johnson, Sheraton Inn, Ramada Inn, Day's Inn were opened for business.

New hangars were built, and runways were surfaced at Hulman Field. Downtown, new fic lights which can be timed were installed, wing for more efficient traffic movement. A y firehouse was completed in neighboring ento. The county purchased a new boiler the courthouse and built a new county ge.

Two local unions built new office facilities one opened an educational training center. y law offices, social security building, ctors' and dentists' offices, and a new Ker- Grotto's clubhouse were all added. Expansion of facilities also took place at Morris cking and Sky King Airport.

Additional banking services are now available with the addition of a new Indiana Savings Loan building, a new Merchants National ak branch in West Terre Haute and at twelve ts, and a new branch of Terre Haute First aonal, which also expanded its downtown cities, and installed new drive-in tellers at its edows branch. Indiana State Bank did extensive remodeling of its facilities. Three new

churches were built, or are presently under construction.

Terre Haute's outlook is extremely bright, perhaps more so now than at any time in recent history. Its residents feel a security in the local economy and observe the problems of the rest of the state, nation, and world with remote interest. The attitude here is, "We can handle it, let's get on with it." I am convinced they can and will.

FORT WAYNE

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As noted in the November-December 1974 Outlook edition, signs of weakness in the durable goods manufacturing sector were portending difficulty for the local economy for the ensuing six months. The erstwhile weakness turned into a rout, with a 28 percent plunge in new orders for durable goods from August 1974 through March 1975. Currently, new orders appear to have stabilized near the January 1975 level. The next six months are likely to be spent building a base for a significant increase in durable goods manufacturing, which will not occur until near the end of the period. The Fort Wayne economy will mirror the durable goods sector.

March employment was approximately 7,000 less than in March 1974, with the bulk of the decrease occurring in the electrical and transportation components of durable goods manufacturing. An equal number of people entered the job market, accounting for the 14,000 increase in unemployment from March 1974 to March 1975. The current unemployment rate is 10.5 percent (seasonally adjusted),

which is exceeded only by Muncie on a statewide basis, essentially reversing the ranking Fort Wayne enjoyed for two years.

When comparing national and local unemployment trends, one notes Fort Wayne generally lags the national economy. Whereas national unemployment began to spurt last September, Fort Wayne began in December. This degree of lag for Fort Wayne will also hold for any positive movement in national economic activity, which provides information as to relative, but not absolute, timing of movement in the local economy.

A declining inflation rate, which should help both consumer confidence and the inflow of money to savings and loan institutions, and to a lesser extent the new housing tax credit, will shortly encourage a resurgence in the housing industry. This will help to revive the wire and small motor industries, important segments of the Fort Wayne economy. Locally, zoning permit requests for single-family housing are below the long-run trend. The January-March total of 150 permits compares adversely with an average of 236.

The transportation industry locally is severely depressed, with little chance for immediate recovery. Any recovery in passenger car sales will help; however, International Harvester, Fruehauf, and local supplier companies are all truck oriented. These companies probably represent, directly or indirectly, one-half of the unemployment increase in the area. There is evidence that the transportation industry engaged in anticipatory purchasing last fall, to avoid costly Department of Transportation brake standards on new models built after

September. Therefore, the problem of inventory liquidation of trucks is being exacerbated. For the local transportation industry to recover fully, the national economy must approach capacity, and this doesn't appear likely with industry currently operating at approximately 70 percent of capacity.

Government contract work and public sector-generated employment appear favorable for the next six months. Local operations Magnavox and ITT recently received \$10 and \$4 million government contracts, respectively. The city administration has continued its aggressive pursuit of federal funds, recently receiving a Housing and Community Development Act grant of approximately \$6 million over a three year period. This activity in addition to the public employment stimulus being provided by the federal government.

Both Bowmar Instrument Corp. (Indiana Incorporated) and Magnavox Co. (major Fort Wayne operations) have experienced severe financial strains during the current recession. Bowmar has filed for protection under Chapter XI of the Federal Bankruptcy Act. Magnavox was purchased by North American Philips Co. The changes create uncertainty both with respect to continuance of local operations and demand for local facilitating functions, such as banking.

In summary, the Fort Wayne economy will not show significant return to normalcy until well after the national economy improves, and a dramatic improvement in the national economy probably will not occur until near the end of the six-month forecast period.

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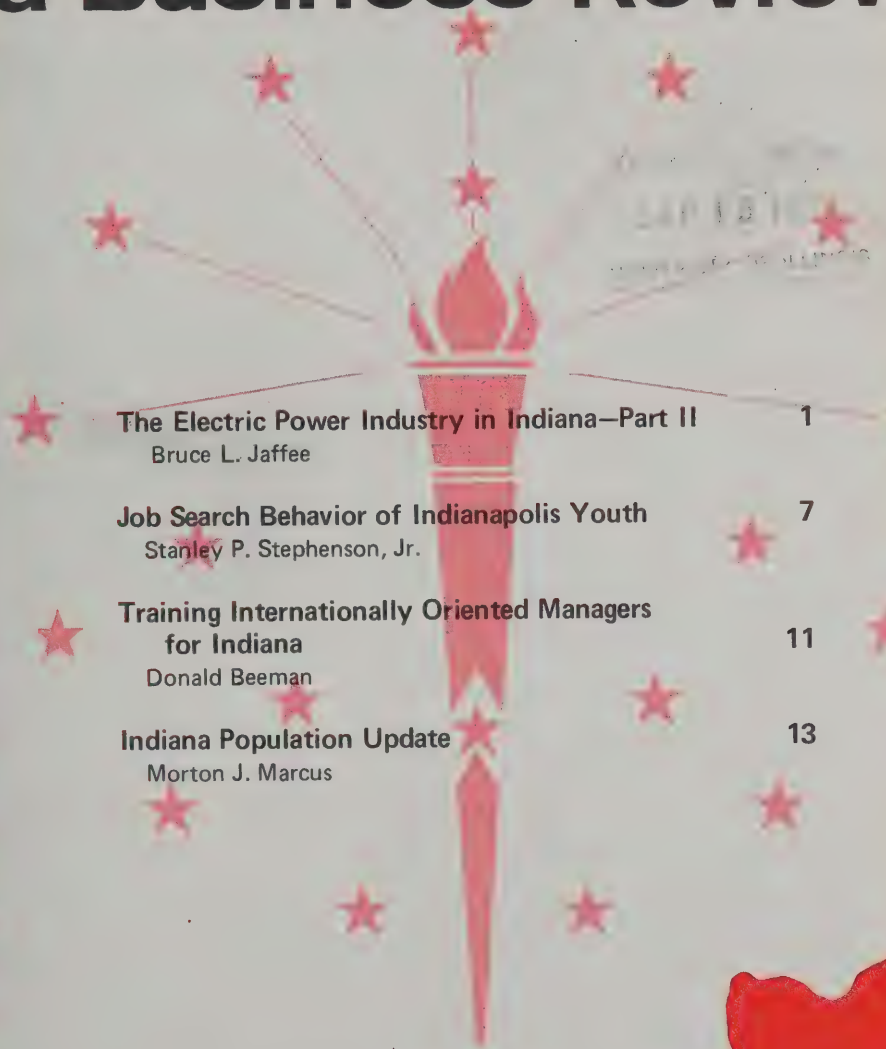
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JULY-AUGUST 1975

Indiana Business Review



The Electric Power Industry in Indiana—Part II Bruce L. Jaffee	1
Job Search Behavior of Indianapolis Youth Stanley P. Stephenson, Jr.	7
Training Internationally Oriented Managers for Indiana Donald Beeman	11
Indiana Population Update Morton J. Marcus	13



Indiana Business Review

VOLUME L

JULY-AUGUST 1975

The Electric Power Industry in Indiana—Part II

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Three types of electric utility rate reform are likely to appear in Indiana within five or ten years. These are a flattening and possible elimination of the declining block nature of the present rate structures, the introduction of a variant of peak-load pricing, and an increase in rates to reflect environmental spending by the firms in order to reduce the costs imposed on society by the pollution emitted by the industry.

FLATTENING OF THE RATE STRUCTURE

Present rate structures are being attacked nationwide by environmental and public interest (consumer-oriented) groups on the

EDITOR'S NOTE: This article is the second of a two-part series on the future design of electricity rates in Indiana. Part I appeared in the March-April 1975 issue of the *Indiana Business Review*. This article described the structure of the electric power industry in Indiana, state regulations, and the techniques of constructing electricity rates. The author would like to thank J. Edward Coleman and Michael Champley, two graduate students in business administration at Indiana University, for their assistance with this project. IU faculty member James Suelflow provided useful comments on an earlier draft.

grounds that the structures are "promotional" and unjustifiably discriminatory. These groups correctly point out that the current rate design encourages electricity use by lowering the price as more power is purchased. Thus, as the accompanying table and figure illustrate, although a customer's bill will increase as more electricity is used, it will increase at a decreasing rate because both marginal and average prices decline with increasing consumption.

There is usually nothing economically wrong with such a pricing structure provided that the marginal price always equals or exceeds the marginal cost of supplying electricity to the customer. However, the stated purpose of the declining block feature of the current rate design is to recover the customer and demand components of total costs from the initial (intramarginal) blocks and to have the last (marginal) block reflect only the energy cost. (Some schedules have explicit demand charges.) Economists point out that a rate structure can be designed to recover fixed costs without resorting to a declining block feature.

One technique is called the two-part tariff (or three-part tariff when billing demand cost separately is economical). Under this procedure

the customer and demand costs assigned to a particular customer or customer class would be recovered as a fixed charge or entrance fee to obtain electric service. No usage, that is, kilowatt-hours (KWH), would be included in this charge. The electricity user would be billed according to a flat per-KWH price. A two-part tariff scheme could be designed to provide total revenue for each customer classification equal to the revenue produced by the current system of rates.

Although this type of pricing for Indiana as well as most of the country would either be a novelty or the reinstitution of a rate design discarded about forty years ago, the two-part tariff has been receiving increasing attention in a few jurisdictions.¹ The Public Service Commission of Wisconsin, for example, in a landmark decision last August determined that the Madison Gas and Electric Company should increase its fixed charge for basic residential service by 100 percent and should almost totally flatten its block structure.² The commission also instituted a winter-summer differential, a topic which is discussed below.

1. For an excellent discussion of the history of electric utility rate structures see Luther Roberts Nash, *Public Utility Rate Structures* (New York: McGraw-Hill, 1933), especially chapters 1-3 and 9.
2. Public Service Commission of Wisconsin, "Application of Madison Gas and Electric Company for Authority to Increase Its Electric and Gas Rates," Docket No. 2-U-7423, August 8, 1974.

From company data presented in Indianapolis Power and Light (IPALCO) case one can estimate approximately what a residential two-part tariff would be for an Indiana electric utility. In this example, capacity customer costs total \$10.55 per month for an average residential consumer. However, there is undoubtedly considerable variation around this average figure. The cost spread results from factors such as the effects of housing density on customer costs (for example, meter reading) and the influence of maximum ampere service for a home on demand costs (for example, the size of wires entering a home).

Although only an approximation, the lower limit of these fixed costs is probably about \$7.00 per month. One could reasonably expect to recover this amount as a fixed charge. The remaining customer and capacity expenses might be recovered in the first 300 KWH of monthly consumption. Any further usage would reflect only energy costs. Section D of the table summarizes this alternative pricing structure.³

Slight modifications to this proposed rate design may be desirable for equity reasons. The

3. This section of the table differs slightly from the corresponding one in Part I of this series; see "The Electric Power Industry in Indiana—Part I, *Indiana Business Review* (March-April 1975), p. 5. The changes reflect rulings by the Public Service Commission in its final decision in the IPALCO case (Case No. 33735, approved April 1, 1975).

INDIANA BUSINESS REVIEW

VOLUME L

JULY-AUGUST 1975

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act of the minimum charge feature would be the heaviest on low income customers. Therefore, spreading part of this charge among the few hundred monthly KWH sales may be desirable.

A comparison of the sections B and D of the table indicates that the new rate structure would be less expensive than the one currently in effect for customers purchasing more than 512 KWH per month. The monthly bill for 512 KWH would be \$15.21 using either sections B or D. Note that both these rate structures would generate the same total revenue for the company.

PEAK-LOAD PRICING

Peak-load pricing is the second major change in electric utility pricing that is expected to occur in Indiana in the next few years. Such pricing would be adapted to both short-run (when the production plant is fixed) and long-run (when new production facilities can be constructed) situations. Both purposes of peak-load pricing are described, in turn, below.

All Indiana electric utilities have at least several generating units and are also interconnected with other utilities, both in Indiana and other neighboring states. IPALCO, for example, has six major generating units and is a member of the Kentucky-Indiana Pool (KIP). As the demand for electricity increases, each company is faced with a complicated production scheduling problem to determine the order and magnitude in which the generating units should be placed in operation. They also compare the costs of generating electricity with their own facilities relative to the expense of purchasing the power from another company.

The usual solution to this production problem is characterized by constant generating costs per KWH and, at a relatively low level, as demand on the utility's system first increases. This situation occurs because the most efficient units are initially put into operation.

Rate Structures for IPALCO Residential Service—Past, Current, Company Proposed, and Alternative

A. Rates Effective August 9, 1971-April 8, 1975*

First 60 KWH per month at 4.5¢ per KWH†
 Next 60 KWH per month at 3.3¢ per KWH
 Next 180 KWH per month at 2.5¢ per KWH
 Next 350 KWH per month at 2.0¢ per KWH
 Next 350 KWH per month at 1.6¢ per KWH
 Excess over 1,000 KWH per month at 1.2¢ per KWH
Minimum monthly bill—\$2.50

B. Rates Effective April 9, 1975‡

First 60 KWH per month at 5.10¢ per KWH
 Next 60 KWH per month at 3.74¢ per KWH
 Next 180 KWH per month at 2.83¢ per KWH
 Next 350 KWH per month at 2.27¢ per KWH
 Next 350 KWH per month at 1.81¢ per KWH
 Excess over 1,000 KWH per month at 1.13¢ per KWH
Minimum monthly bill—\$2.85

C. Rates Proposed by IPALCO in 1974 Rate Case*

First 60 KWH per month at 5.85¢ per KWH
 Next 60 KWH per month at 4.29¢ per KWH
 Next 180 KWH per month at 3.25¢ per KWH
 Next 350 KWH per month at 2.60¢ per KWH
 Next 350 KWH per month at 2.08¢ per KWH
 Excess over 1,000 KWH per month at 1.55¢ per KWH
Minimum monthly bill—\$3.00

D. Alternative Rate Structure §

Fixed fee or charge—\$7.00 per month
 First 60 KWH per month at 3.40¢ per KWH
 Next 60 KWH per month at 2.50¢ per KWH
Minimum monthly bill—\$7.00

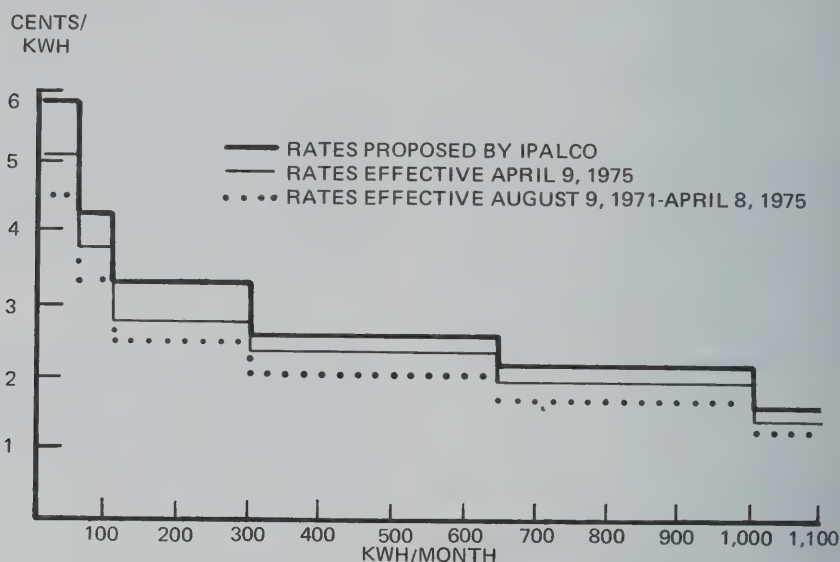
*These were the rate schedules presented by the company in the 1974 IPALCO rate case.

†KWH = kilowatt-hour.

‡Rate schedule provided by D. R. Weidner, director, Rate Department, IPALCO.

§This alternative schedule was calculated by the author and is based on data presented by IPALCO and its consultants in the 1974 rate hearing, with adjustments made by the author. For purposes of comparison and simplicity, the schedule does not include a variant of peak-load pricing although, as discussed in the text, such an addition would be highly desirable. The schedule was constructed on the assumption that usage would not respond to changes in rates—that is, price elasticity is zero. This assumption is wrong; recent studies have found that the elasticity is approximately -1. However, since the company assumed a zero elasticity in constructing its proposed rates, the alternative proposal makes the same assumption in order to facilitate comparison. Under this assumption, the rates in sections B and D generate approximately the same total revenue for the company.

Indianapolis Power and Light Company: Rate A—Basic Residential Service



However, as demand approaches the generating capacity of the company, the firm responds by using inefficient standby units and by purchasing power from other utilities. The net effect is that costs per KWH rise rapidly as the system peak is approached. A peak-load pricing structure for this short-run problem would follow the increased costs of generation and would simply maintain that prices should rise whenever the system peak is approached.

This type of pricing should be compared with the present situation. All Indiana electric utilities are summer-peaking companies. That is, their system peaks are reached during the months of July, August, and September. Because of widespread air conditioning use, these are also the months in which most customers purchase their greatest amounts of electricity. Therefore, due to the declining block structure of most utility rates, users in these months are charged their lowest average and marginal prices. Thus, we have an anomaly. When system peaks are reached, generating costs are at their *highest* but customer prices are at their *lowest* levels. Peak-load pricing would correct this problem.

Peak-load pricing is also useful for assigning responsibility and costs for expansion of electric system. Generating capacity is usually increased only when one determines that demand for electricity will approach the current maximum with increasing frequency. Peak-load pricing would make peak users responsible for paying for any capacity expansion since *their* patterns of demand require the new construction. The present company practice, with which the Indiana Public Service Commission (PSC) concurs, is to have off-peak users pay a portion of these expansion costs. This technique is economically unsound and penalizes those customers who use electricity primarily or exclusively in off-peak periods (for example school systems and customers who do not have air conditioning).

As described above, peak-load pricing would modify the existing rate design by increasing prices as the system peak is approached. The desirable features are following the pattern of generating costs, making those responsible for plant expansion also responsible for the cost of smoothing the pattern of electricity use over time—that is, increasing the load factor.

Unfortunately, present technology and costs are such that any peak-load pricing technique based on system capacity is prohibitively expensive. Although such a technique will undoubtedly be eventually feasible there are several interim schemes which could be quickly instituted and which could provide good approximations.

The *first* method would employ a rate surcharge. Periods close to or equaling the summer peak are usually easy to predict in Indiana. They occur in the afternoon or early morning of hot and humid summer weekdays. Therefore, if a rate surcharge could be instituted during these hours, a tolerable approximation of ideal peak-load pricing would be achieved.

Such time-of-day metering does exist, and further improvements are likely in the near future. The customer, for example, would have two meters, one of which would record usage during the period 2:00-7:00 P.M. on weekdays in summer months; the second meter would record usage during all other periods. Consumption measured by the first meter would be billed at a higher rate than consumption measured by the second.

This metering system could first be installed for large commercial and industrial customers. If successful, it could be extended to other classes of customers. It encourages more efficient use of electrical devices during the period in which the peak meter is recording and a shifting of electrical use to the low rate period whenever possible.

One potential drawback of such a system would occur if there would be an extended blackout. In that case, the timing of all the meters would have to be reset. (A major manufacturer of all types of electrical summation meters, Duncan Electric Company, is located in Lafayette, Indiana.)

A *second*, though less desirable, approximation to an ideal peak-load pricing scheme is the so-called winter-summer differential. This technique is based on the fact that demand is likely to approach capacity only in the summer

months. Furthermore, during such months most customers are using the greatest amount of electricity and are billed at the margin at the rates indicated in the final or penultimate block(s) in the rate structure. As a result of these factors, a summer surcharge could be added to these final blocks to both discourage consumption and make peak users responsible for any plant expansions. Because of weather conditions in Indiana, the "summer" might be defined as the July-September period, with the remainder of the year being considered "winter" for rate-making purposes.

This rate differential system, which is employed in many other states, could be instituted immediately and at a very low cost. No new meters are required, and only a small amount of computer programming would be needed to adjust the billing procedures. Some expense should be incurred, however, in informing customers about the change and explaining the differential to them.

A major drawback of a winter-summer differential is that it allows only a very limited amount of substitution from the peak-charge period ("summer") to the off-peak charge period ("winter"). Air conditioning or clothes drying might be delayed several hours to avoid a high on-peak charge but certainly not for several months. Yet, a seasonal differential would give customers an incentive to use electricity more sparingly in the peak period by, for example, installing more energy-efficient air conditioners.

A *third* variant of peak-load pricing is the development or expansion of an "interruptible" class of electric service. Under this rate schedule, the company could disconnect these customers from the electric system whenever capacity was being approached. Electronic signalling devices exist which permit the disconnection and reconnection from central locations at a relatively low cost. The company would disconnect these customers whenever the marginal costs of serving such customers begin to exceed the additional revenue that would be collected.

Although few customers would want to have all their electric service on an "interruptible" basis (one exception would be large or important users for whom standby generators are feasible), the low rate would prove enticing to those customers who could postpone their electricity use, could generate electricity with their own facilities, or would in general find the costs of the delay outweighed by the reduction in electricity costs. Water heating, clothes drying, and air conditioning might fall into this third category. "Interruptible" service is not unknown to customers. Natural gas is frequently available on this basis for industrial and commercial users. (In recent years, many commercial and industrial users have been able to obtain service, if at all, only on this basis.) Many electric utilities have a small number of "interruptible" electric water heating customers.

INCLUSION OF ENVIRONMENTAL COSTS

The final pricing change that will occur in the coming years is the increasing of rates as the utilities are forced to reduce pollution. The magnitude of the rate increase will depend on the types and severity of the pollution control regulations and the size of the pollution problem. Companies burning low quality coal in inefficient plants located in urban areas will be faced with the highest pollution control costs. At present Indiana residents are paying for pollution emitted by the industry in the form of noise, aesthetics, and damage to buildings, vegetation, animals, and human health. Those living closest to power plants suffer the highest costs. If the pollution control costs are reflected in higher electric bills, residents will still pay but on the basis of their electrical consumption rather than geography.

The primary formulation, implementation, and enforcement of pollution control laws will occur at the federal level. For example, the Environmental Protection Agency is presently maintaining that the sulfur dioxide problem should be ameliorated by the installation of

scrubbers in order to reduce the pollutant from gases emitted from smoke stacks. The industry has generally argued that the scrubber technology is risky, creates a solid waste disposal problem, and is very expensive.

The utilities have countered with an alternative proposal which maintains that a much less expensive solution (in terms of pollution control costs) would be the construction of very tall smoke stacks to disperse the effluent at the reduction of production when weather conditions are unfavorable. One major problem with this last solution is that poor weather conditions (from an environmental point of view) such as temperature inversions often coincide with days of high electricity demand. Regardless of the remedy chosen, there will be considerable spending for pollution control in future years, much of which will be reflected in higher electricity bills.

The Indiana Public Service Commission has played only a passive role in the pollution problem. Although the PSC does not have jurisdiction or power to establish pollution control laws or regulations, it can have considerable influence on environmental control expenditures by electric firms. For example, the commission can encourage the construction of nuclear power plants in order to reduce air pollution, grant a rate increase with the provision that a portion of the additional revenue be dedicated to pollution control expenditure, and include environmental spending as justifiable expenses and thus recoverable from its customers in a regulatory hearing. Other state commissions have occasionally used these policies.

In conclusion, numerous changes are likely to beset the electric power industry and its customers in the near future. Higher rates are inevitable, but Indiana will still remain a relatively low cost electricity state because of its reliance on coal to generate electricity. Rate design changes will occur—especially a flattening of the rate structure, the implementation of some variant of peak-load pricing, and the internalization of pollution damage costs into electricity prices.

Job Search Behavior of Indianapolis Youth

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During the last twenty-five years, youth unemployment has been significantly higher than adult unemployment in the United States, and racial differentiation within the youth groups has been pronounced. In spite of this situation, little is known about unemployed youth and whether their behavior while unemployed contributes to their high unemployment rate. In a recent survey of unemployed young men, data were collected on a variety of economic, demographic, and attitudinal characteristics. Better understanding of the unemployment behavior of Indianapolis youth, especially of the job search differences between whites and blacks, was the primary goal of this study.¹

In this article, I will first examine the data source and then focus on four main areas of the youth job search: expenditures on job search; amount of time spent searching; accepted minimum wage; and anticipated length of employment at a new job. These four areas determine the individual's gross financial return from job search ($\text{wage-per-hour} \times \text{hours-worked-per-week} \times \text{length-of-expected-job-reure}$) and the individual's costs of job search ($\text{expenditures-of-job-search-per-week} \times \text{search duration}$). I will then discuss the policy implications arising from the survey.

1. The author wishes to acknowledge the assistance of the Indiana Employment Security Division. Financial support was received from the Manpower Administration of the U.S. Department of Labor (grant 91-18-72-2). Any opinions are those of the author, and the author takes full responsibility for any errors.

DATA SOURCE

Because such personal characteristics as age, sex, race, skill, and job type sought are likely to affect the job opportunity available to the individual, the survey's sample design attempted to control for these factors. Specifically, the study included only unemployed 18-21-year-old men who had eight to twelve years of formal education and who were seeking full-time jobs with the aid of state employment offices. Each youth had had at least one job in the past two years.

Three special interviewers questioned a random sample of 151 whites and 149 blacks who had met the criteria and had either registered with or revisited the Indianapolis field offices of the Indiana Employment Security Division in November 1971. Data on labor market histories, skill training, sociopsychological variables, demographic measures, and job search variables were then collected. Irreconcilable differences between the key labor history variables measured in the survey and the office records of these variables reduced the final sample to only 142 white and 139 black youth.

JOB SEARCH COSTS

One factor in search behavior is job search costs—both direct and indirect. *Direct costs* include expenditures for travel, newspapers (help-wanted ads), and private employment

agencies, and such items as new clothes and grooming aids in order to appear more presentable at a job interview. The degree of search effort, as measured by cash expenditures and frequency of search attempts per time unit, affects direct costs.

Choice of search channel or technique also affects these costs. That is, direct search costs will vary depending on whether the searcher prefers to visit the firms or contact friends and relatives about openings or use an intermediary like an employment agency. To the extent "direct-gate" applications are used, we would expect direct expenditures to increase as search length increases and the individual travels over an ever widening area.

In addition, direct expenditures are likely to be linked with wealth. Since most financial institutions do not grant loans for investment in job search, an individual with greater personal wealth or nonmarket income can spend more on looking for work.

The cost of search as presented in the accompanying table is the sum of average weekly direct expenditures and travel costs. Midway through the interviewing, a sample of 92 respondents revealed that the average number of days per week spent searching was 3.5 for whites and 2.7 for blacks. Thus travel costs per week for the entire sample were estimated by multiplying travel mode, price, and distance traveled per day by the race-specified number of days per week spent in job searching. The table shows that white youth had greater weekly search costs because of bigger direct expenditures and travel costs and more days per week spent searching.

In addition to the tabular analysis of job search costs, multiple regression analysis was used to examine how job search costs varied by age, education, and search method. Even after controlling statistically for the effects of other variables, regression results show that black youth have lower average weekly search costs. Specifically, regression-adjusted average black search costs per week were \$6.15 lower than average white search expenditures.

Youth Job Search Cost Per Week*

	White	Black
Estimated weekly direct costs†	\$3.61	\$2.38
Estimated weekly travel costs‡	\$5.05	\$2.38
Travel costs per day	\$1.46	\$0.88
Days of search per week	3.46	2.70
n =	37	28
Travel and direct costs per week	\$8.66	\$4.76

*Search costs were estimated from data on respondents still unemployed and, thus, are only approximations of true final costs. Still, the relative proportions and racial differences may be interpreted as indicators of final costs. Unless otherwise indicated, *n*, number of subjects, equals 281; there were 142 whites and 139 blacks.

†Direct cost estimates were estimated as follows: each letter was valued at one dollar; phone costs were limited to long distance calls; and moving costs, agency fees, and other costs were a mix of actual and anticipated costs for current search.

‡Estimated weekly travel costs are travel cost per day X days of search per week. Estimates for days per week spent searching, which were revealed by a posttest sample, were used for the entire group.

Reasons underlying this difference involve other measures of search behavior. White youth simply engaged in more extensive job search or made more weekly contacts with local firms than did black youth. White youth made 4.15 contacts per week and blacks made 2.38.

White Indianapolis youth may have been able to travel from firm to firm more easily than blacks because 66 percent of the whites owned cars and only 42 percent of the blacks owned cars. In other words, differences in search extensiveness and travel costs also contributed to the racial difference in weekly search costs.

The *indirect* cost of search is sometimes called the "cost of time" or "foregone earnings." The value of time for an unemployed person may be small, but it is not zero. For example, selling apples on a street corner is an opportunity few unemployed persons may be willing to accept, but it has a positive return. Similarly, an unemployed person may do odd jobs, such as home repairs or painting, and again, such time has a positive value.

In this study, the indirect cost of job search measured by a youth's answers to the question, What is the very least wage per hour you would be willing to accept at present? This is a proxy measure for the value of unemployed youth and is sometimes called a "reservation wage" in labor supply literature or an "acceptance wage" in job search literature. Presumably, if a job hunter receives an offer equal to or greater than his reservation wage, he stops searching and accepts the job. Alternatively, if a searcher rejects offers below his reservation wage, then he foregoes the opportunity to earn earnings at that level in future periods. The survey reveals that the average reservation wage per hour for white youth is \$2.00; for black youth, the reservation wage is \$1.93. These figures may be compared with the average hourly pay on the last job (\$2.44 for whites and \$2.26 for blacks) or with the wage response (\$2.78 for whites and \$2.75 for blacks) to the question, What hourly wage or weekly take-home pay would you like to earn on this job you are looking for?

White and black youth are similar in their determination of a reservation wage and the wage they would like to have. However, if one considers the ratio of the reservation wage to the wages as an indicator of willingness to be flexible in wage requirements, white youth are more willing to make greater negative adjustments. This issue is important if an excessively high reservation wage leads to job rejections and prolongs unemployment duration.

Using regression methods, the effects of unemployment duration and other variables on youths' reservation wage can be examined. The results show that unemployment duration has a negative impact on the reservation wage. For each added week of unemployment, the reservation wage fell by nearly two cents per hour. This result is not unexpected. For example, the longer a house goes unoccupied, the more the landlord may feel that the rent is too high. In the process of attracting a tenant, the landlord lowers the rent. So, too, the job searcher, who wants to sell the services of his labor, lowers his

reservation wage as unemployment duration increases. As for racial differences, although black youth had a lower average reservation wage than white youth, there does not appear to be a special race effect on the decay in the reservation wage.

Several other variables were significant. The greater a youth's age and education, the greater his reservation wage will be. A surprising result is the extent to which expectation of recall to an old job contributes to a higher reservation wage. Youth expecting recall had, on the average, a reservation wage that was twenty-four cents above the reservation wage of youth not expecting to get their old jobs back.

UNEMPLOYMENT DURATION

Another dimension of search behavior is unemployment duration, which the U.S. Department of Labor defines as a continuous period of job search that is not interrupted by a two-week interval of not looking. National data show the 1971 unemployment duration to have been 11.3 weeks.² Market conditions, such as the local unemployment rate or job vacancy rate, adversely affect average unemployment duration. Individual characteristics, such as education, race, and job history, may change average unemployment length since these factors may influence how promising a young man appears to an employer.

Unemployment duration may also vary according to reservation wage. As noted earlier, a high reservation wage will increase expected unemployment duration; at a high wage reservation wage, few offers are acceptable. In contrast, if search costs rise over unemployment

2. Department of Labor data from *Handbook of Methods*, Bureau of Labor Statistics Bulletin 1711, U.S. Department of Labor, (Washington, D.C.: Government Printing Office), p. 8.

National data on 1971 employment duration from "Unemployment by Duration, 1947-1973," Table C-27, *Economic Report of the President* (Washington, D.C.: Government Printing Office, 1974), p. 280.

duration, continued search may be too expensive, thus shortening unemployment duration.

As expected, a regression analysis of the survey results show that a greater reservation wage increases unemployment duration and that greater direct costs lower unemployment duration. However, these results are not statistically significant.

In this study, the duration of unemployment was estimated either by the number of uninterrupted weeks the respondent had spent looking for work, or, if laid off his last job, the duration was the time that had elapsed since then. Average unemployment duration was 11.9 weeks for blacks and 6.6 for whites.

Risk attitude deserves special attention. Persons willing to take risks may have a greater period of unemployment since they may hold out for a job paying high wages even though chances of finding such work are slim. The risk scores used were indexes developed from answers to questions regarding gambling, financial planning, and willingness to accept jobs with physical risk. As expected, individuals displaying greater risk propensity are more likely to undergo longer periods of unemployment than "lower risk" persons.

FUTURE JOB TENURE

A final dimension of a job offer is the anticipated length of job tenure. Presumably, a searcher choosing between two acceptable offers that are similar in all aspects except job tenure will select the job that will last longer. Alternatively, he may even be willing to take a job with a lower wage that promises longer tenure. In more technical terms, the individual will prefer that job with greatest product: wage \times hours \times tenure. (More precisely, since most individuals prefer present to future dollars, the searcher will prefer that job with a wage/hours/tenure combination affording the greatest present value, or capitalized value, of future earnings.) At the same time, a young

man who has pressing financial burdens or wants to return to a previous job, enroll in school, or join the military may be willing to accept a short-term, low-paying job in order to maintain a minimum income.

A measure for the number of weeks on the next job was obtained through direct responses. The average for whites was forty-nine weeks. The blacks' average was seventy-one weeks. One may discount these data somewhat because of the hypothetical nature of the question, "How long do you expect to remain on the next job?" Average time on the last job was substantially lower for both groups—twenty-two weeks for whites and nineteen weeks for blacks.

Statistical analysis shows that the longer the search duration, the shorter the tenure one expects in the next job. At some point, a searcher may take any job he can get even if it is a low paying job that will not last long. This suggests that a type of "discouraged worker" phenomenon occurs as job search lengthens. The term is from labor supply literature and refers to the tendency for an unemployed person to become discouraged, stop job hunting, and drop out of the labor force if no job is found.

This situation implies a gradual adjustment to not finding a job. Caution must be exercised, however, in interpreting this result since the effect was not significant when separate regressions were made by race. That is, interactions between race and other variables may have contributed to the statistical significance of the unemployment duration effect. The issue requires further research using data on actual tenure of the next job.

POLICY IMPLICATIONS

Job search involves a number of individual behavioral adjustments during unemployment duration. In this study, adjustments in one's reservation wage, search costs, and planned time on the next job were examined with

ward to their interaction with unemployment duration. Racial differences in these adjustments also were examined.

Results show that the reservation wage increases as the unemployment duration increases. Reservation wage declines do occur, and this may raise the probability of finding a new job. Yet other factors, such as recall expectations and willingness to accept jobs of shorter duration, may also be important determinants of potential reemployment success.

The most important racial differences in search behavior are in search costs. The study results show that average weekly direct expenditures of white youth are much greater than those of black youth. In addition, blacks expect to remain on their next jobs longer than whites. Racial differences in reservation wage and unemployment duration, however, are not statistically significant. That is, the initial mean difference in unemployment duration between whites and blacks does not hold up in regression analysis.

This case study, based on 1971 data, can only suggest policy implications. If a young man sets a reservation wage unrealistically high, he will be unemployed longer. Perhaps youth, especially black youth, should be counseled to be more flexible in terms of their wage requirements. Another policy implication concerns search costs. Black Indianapolis youth are restricted in their search attempts due to a lack of transportation that may have contributed to fewer contacts with firms and thus prolonged job search.

This points out a need for the Indianapolis authorities to examine different methods of lowering search costs. Reduced bus fares for unemployed youth or firm-financed travel from the employment service to the firm might contribute to search cost parity and hence unemployment parity between young whites and blacks. In addition, job counseling and travel subsidies may help reduce youth unemployment and help bring it into line with adult unemployment.

Training Internationally Oriented Managers for Indiana

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A few years ago the only Indiana businessmen who needed to think internationally were those involved in export sales for large firms such as E. Lilly and Company or Cummins Engine Company, Inc. Today, an international orientation is important for nearly everyone in business and, indirectly, is important for all citizens. Indiana companies find foreign competition in the market place where they sell goods and purchase raw materials. They find foreign

competition in the money markets and, with ever-increasing foreign investment, even in the labor market. Indiana firms also have begun to seek foreign markets, production sites, raw materials and capital. As a result, a new Indiana business environment is developing and a key characteristic of this new environment is interdependence.

The business dictum "know your competition" is difficult to follow when the competi-

tion's home office is in another country. Devaluations of the dollar have made it easier for foreign firms to purchase Indiana companies or to set up subsidiaries to serve the state market. Foreign purchases of Indiana's agricultural goods have increased the importance of that industry. The increase in crude oil prices has made Indiana's coal reserves more valuable.

In view of these changes in the environment, it becomes clear that businesses should begin to think internationally because no business is truly domestic. This objective can be accomplished in only two ways: either management must reorient its employees or it must bring internationally-oriented managers into the organization. Either task can be difficult, but the latter is facilitated by the existence of a nonprofit organization called Association Internationale des Etudiants en Sciences Economiques et Commerciales (AIESEC).

Operating on the campuses of Indiana University in Bloomington, Indiana University-Purdue University at Indianapolis, and Notre Dame, AIESEC is a source of employable, well trained foreign business students and internationally-oriented American students who have lived and worked abroad. In the past four years, more than forty Indiana businesses have used AIESEC workers. Cummins Engine, for example, has not only accepted foreign student workers, but has also financially supported the national office of AIESEC and hired American AIESEC students after graduation.

Firms participate in the AIESEC program for many reasons. One of AIESEC's strong supporters is P. J. Harrah, president of Bloomfield Manufacturing of Bloomfield. Harrah explains, "We find the world no longer independent but interdependent. In reviewing past international conflicts, many can be traced to misunderstanding and just plain ignorance on the participants' part. Your particular program (AIESEC) is a type that does not show up readily in the profit and loss column, but we think that if there is a better understanding throughout the world on business procedures and conditions, then those that are currently in business here and abroad have a greater ability to survive and grow in the future."

Bloomfield Manufacturing's participation in AIESEC has been different from that of many other companies. Bloomfield pays the administrative fee and the foreign student's salary, but then assigns the student to work for a city government in Indiana. These students have worked for the mayors of Bloomington and Anderson.

Another firm which has supported AIESEC-Indiana is Essex International of Farmington, Wayne. Essex has contributed funds to help finance conferences and training programs. These conferences are open to all students and are intended to increase awareness of the problems and pleasures of international business.

AIESEC is playing an important role in meeting the challenges of international business in Indiana, and will help supply the internationally-oriented managers of the future.

Indiana Population Update

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Since the census of April 1970, Indiana has added 136,000 citizens, reaching an estimated total population of 5,330,000 in July 1974. This increase was the result of an excess of births over deaths. During the period, migration from Indiana was estimated to have exceeded migration by 40,000 persons. Details of the estimated population for each county are shown in Table 1.

INDIVIDUAL COUNTIES

Only eleven counties were estimated to have lost population between 1970 and 1974. These included four counties with major cities: Marion (Indianapolis), St. Joseph (South Bend), Vanderburgh (Evansville), and Vigo (Terre Haute). The heaviest loser, according to these data, was Vanderburgh, which had a decline of 10,000 in population. That county's net out-migration of 7,400 persons was offset by a natural increase (births greater than deaths) of approximately 2,800. Tipton County had the highest rate of population decline at -3.8 percent, losing approximately 600 persons on a 1970 base of 16,650.

Honors for population growth (if they are awarded) go to Hamilton County, which added 6,500 persons to its numbers; approximately 600 of this increase was a result of net in-migration. With a growth rate of 19.4 percent for the period, Hamilton County edged Warrick (19.0 percent) as the fastest growing county in the state.

While Hamilton County led in net in-migration for the state with 8,500, neighboring

Marion County had the highest net out-migration of nearly 32,000 persons. However, Marion County is estimated to have lost only 1,300 persons from 1970 to 1974, as the heavy net out-migration was offset to a large extent by an excess of births over deaths equal to nearly 31,000. All of the counties bordering Marion County gained in population during the period and all showed both net in-migration and growth rates higher than the state's 2.6 percent average. A similar pattern was found in the Indiana portion of the Evansville Standard Metropolitan Statistical Area (SMSA) where the loss in the central county, Vanderburgh, was offset by the growth of three bordering counties. Of the major metropolitan areas, only the Terre Haute SMSA showed an overall population decline (-1,500 persons, less than 1 percent).

Of the eighty-one Indiana counties that gained population from 1970 to 1974, twenty-five did it on the strength of natural increase going against net out-migration. Lake County is the best example of this phenomenon with a net out-migration of 19,500 but sufficient natural increase so that overall the county added 3,100 persons. In fifty-two counties, net migration and natural increase together combined as growth factors. For example, net in-migration of approximately 600 plus natural increase of 900 resulted in a 1,500-person growth for Scott County. Net migration was estimated at less than fifty persons in Cass, Dubois, Fountain and Washington counties; in these instances growth was solely a function of natural increase since in- and out-migration was balanced.

TABLE 1—Population of Indiana Counties, 1974

	July 1, 1974 (provisional)	Change, 1970-74	Net Migration, 1970-74		July 1, 1974 (provisional)	Change, 1970-74	Net Migration, 1970-74
<i>Indiana</i>	5,330,000	136,000	-40,000				
Adams	27,400	500	-800	Lawrence	40,700	2,700	1,600
Allen	288,900	8,400	-3,800	Madison	139,400	900	-4,300
Bartholomew	59,100	2,100	-800	Marion	792,500	-1,300	-31,900
Benton	11,200	-100	-300	Marshall	38,100	3,100	2,000
Blackford	16,000	100	-300	Martin	11,000	*	-400
Boone	32,000	1,200	500	Miami	40,300	1,000	-900
Brown	9,700	600	400	Monroe	89,100	3,900	400
Carroll	18,200	500	*	Montgomery	34,400	500	-200
Cass	40,700	300	-600	Morgan	47,300	3,100	1,100
Clark	80,900	5,000	2,000	Newton	13,000	1,400	1,200
Clay	24,400	500	400	Noble	32,900	1,500	300
Clinton	30,800	300	-400	Ohio	4,600	300	300
Crawford	8,700	700	500	Orange	17,400	400	100
Daviess	26,700	100	-300	Owen	13,100	900	800
Dearborn	30,800	1,300	700	Parke	15,600	900	700
Decatur	23,100	400	-300	Perry	19,100	*	-500
Dekalb	31,900	1,000	-100	Pike	12,100	-200	-100
Delaware	130,600	1,400	-3,100	Porter	94,500	7,400	3,300
Dubois	31,900	1,000	*	Posey	22,900	1,100	700
Elkhart	135,300	8,700	3,100	Pulaski	12,800	200	100
Fayette	27,400	1,200	200	Putnam	27,600	700	200
Floyd	57,700	2,100	700	Randolph	29,500	500	-200
Fountain	18,600	400	*	Ripley	22,300	1,200	400
Franklin	17,600	700	100	Rush	20,900	600	100
Fulton	17,700	800	600	St. Joseph	242,300	-2,700	-9,100
Gibson	31,400	1,000	800	Scott	18,600	1,500	600
Grant	84,400	500	-2,400	Shelby	39,100	1,300	200
Greene	28,100	1,200	1,000	Spencer	17,700	600	400
Hamilton	65,100	10,600	8,500	Starke	20,800	1,500	1,100
Hancock	40,300	5,200	3,700	Steuben	22,400	2,200	1,600
Harrison	23,100	2,700	2,100	Sullivan	19,400	-500	-400
Hendricks	59,900	5,900	3,600	Switzerland	6,600	300	300
Henry	53,200	600	-900	Tippecanoe	112,200	2,800	-1,900
Howard	88,300	5,100	1,300	Tipton	16,000	-600	-1,100
Huntington	35,800	800	200	Union	6,700	100	-100
Jackson	34,200	1,000	-100	Vanderburgh	164,200	-4,500	-7,400
Jasper	22,700	2,200	1,600	Vermillion	17,100	300	300
Jay	24,100	500	-100	Vigo	112,700	-1,900	-3,500
Jefferson	27,700	700	100	Wabash	35,400	-200	-900
Jennings	20,600	1,200	300	Warren	8,500	-200	-300
Johnson	67,800	6,600	4,000	Warrick	33,300	5,300	4,100
Knox	40,900	-600	-700	Washington	19,800	600	
Kosciusko	52,200	4,000	2,100	Wayne	79,200	100	-2,100
Lagrange	22,900	2,000	500	Wells	25,000	1,200	400
Lake	549,400	3,100	-19,500	White	21,900	900	300
La Porte	105,900	600	-2,700	Whitley	24,800	1,400	700

*Less than 50 persons.

SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P-26, No. 113, *Estimates of the Population of Indiana Counties and Metropolitan Areas: July 1, 1973 and 1974*, May 1975.

URE 1

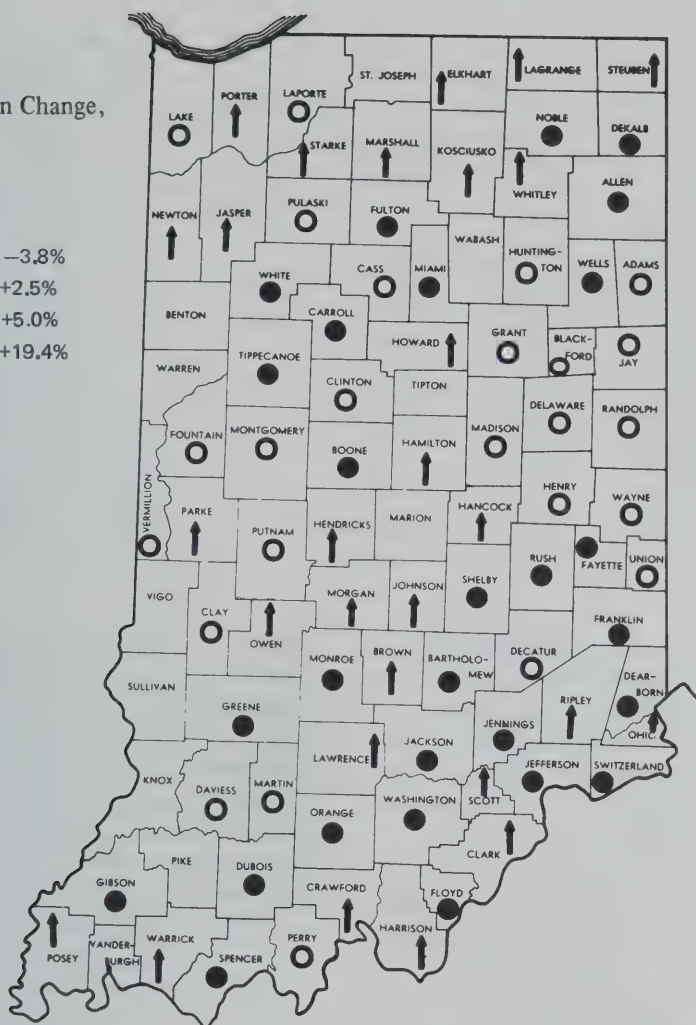
Change,
0-74

NK = -0.1% to -3.8%

○ = +0.1% to +2.5%

● = +2.6% to +5.0%

↑ = +5.1% to +19.4%



REGIONAL PATTERNS

Population growth has not been evenly distributed across Indiana during the past four years. The pattern becomes clearer in Figure 1. Seven of the eleven counties which experienced declines in population are in the western part of the state, from Vermillion on the north to Vanderburgh on the south. The other four declining counties are in the central part of the state, in an irregular line from St. Joseph County through Wabash and Huntington, down to Marion County. Growth rates above the state average dominate the central and eastern Indiana.

One common view of the state is that the industrialized northern area, which is blessed with rich soil and skilled craftsmen, can be contrasted with a rural, sluggish southern area. A study of Figure 1 will show the fallacy of this thought pattern. South of Interstate 70 and east of Indiana Highway 37, every county except Decatur grew at a pace equal to or greater than the state average for the four-year period.

A stronger realization of the regional patterns of growth can be seen in Table 2. The growth rates for the familiar fourteen economic regions of the state range from a low of 0.1

TABLE 2

Population by Region

Region	1974	Change, 1970-74 ^a	
		Number	Percent
1	819,100	16,542	2.1
2	467,900	13,213	2.9
3	512,000	19,220	3.9
4	255,800	4,992	2.0
5	238,400	6,313	2.7
6	477,200	4,594	1.0
7	216,800	125	0.1
8	1,144,000	32,648	2.9
9	151,800	2,598	1.7
10	171,000	9,056	5.6
11	146,700	5,242	3.7
12	92,000	3,831	4.4
13	411,200	3,731	0.9
14	226,200	12,856	6.0

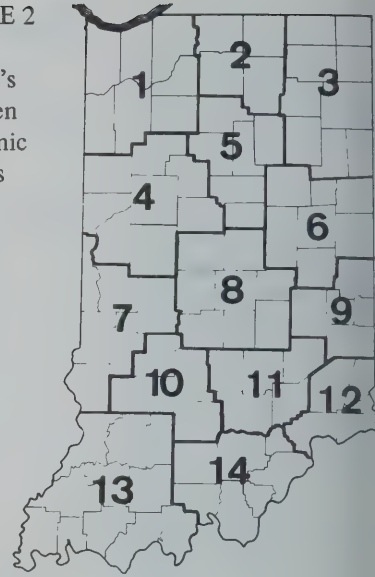
SOURCE: See Table 1.

percent in Region 7 (the Terre Haute area) to a vigorous 6.0 percent in Region 14 (the New Albany-Jeffersonville area). Figure 2 shows the regional detail for those confused by the recent realignment of counties into regions. At latest count, there were eighteen new regions carved from the more widely accepted fourteen.

Southeastern and south-central Indiana Regions 10, 11, 12, and 14 all had growth rates of 3.7 percent or better. Only Region 3 (the Fort Wayne area), at 3.9 percent, was in the same range. Other northern, central, and western regions fell below the 3.0 percent growth rate. Contiguous Regions 7 and 13 in the central-western and southern-western area of the state grew at rates of less than 1 percent. Contiguous Regions 6 and 9 managed rates below 2.0 percent. Region 2 showed a growth rate of 2.9 percent as three of its four counties grew faster than 5.0 percent to offset the population decline of St. Joseph County. In Region 5, Tipton and Wabash counties declined and Cass County grew at a rate below the state average, but a 6.1 percent growth rate in populous Howard County (Kokomo) raised the region above the state average of 2.6 percent.

Population growth is not a sign of virtue, a

FIGURE 2

Indiana's
Fourteen
Economic
Regions

measure of the quality of life, or an indicator of economic vitality. It does suggest a positive stimulus to retail trade, to the demand for housing, and to the demand for certain government services. Population decline does not necessarily signify a movement toward ecological balance or economic decay. With scant information available from these extensive campaigns to "get our county growing" and "bring in jobs to keep our youth," such judgments may not be warranted. More important than population figures are the changes in per capita income and the age distribution of the population. Out-migration may be a sign of a labor market adjusting to changing opportunities. Until a more complete picture can be drawn, ethical, social, and economic judgments should be restrained.

AUTHOR'S NOTE: Population estimates issued annually by the U.S. Bureau of the Census are based on a combination of historical statistical relationships: recorded births, deaths, and school enrollment, plus data derived from administrative records of the federal government. Annual estimates of the population component of the population projection procedure are now under development by the Division of Research, Indiana University School of Business, in conjunction with the Indiana State Board of Health.

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Indiana Business Review

Volume 50, No. 8

August 1975

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by
Bernie Faulkner
Richard Spiers

UNITED STATES-INDIANA BUSINESS INDICATORS* Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

		UNITED STATES				INDIANA		
		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT								
Agricultural employment	June	116.1	116.1	119.1	June	107.1	107.4	113.1
Manufacturing employment	June	93.1	93.1	103.8	June	88.5	88.8	102.6
Average weekly hours (no.)	June	39.4	39.0	40.4	June	39.8	39.3	41.2
Average weekly earnings (\$)	June	187.54	184.47	176.95	June	216.51	213.01	208.47
Nonmanufacturing employment	June	125.8	125.9	130.7	June	119.7	119.8	120.2
Employment rate (%)	June	8.6	9.2	5.2	June	9.2	9.9	6.2
Employment rate—married males (%)	June	5.7	5.8	2.6	—	—	—	—
Continued unemployment claims	—	—	—	—	June	562.5	544.6	188.6
PRODUCTION								
Bituminous coal production	May	122.0	115.4	114.7	June	108.7	100.7	95.5
Industrial electricity production	April	130.7	132.1	142.0	—	—	—	—
Industrial electricity sales	—	—	—	—	May	114.7	127.7	140.5
Manufacturing production	June	107.8	107.4	125.6	May	116.1	116.8	133.6
Raw steel	May	85.5	93.3	110.5	May	93.2	105.1	131.4
CONSTRUCTION								
Construction activity—total	May	158.0	156.2	178.4	May	163.2	159.1	174.1
Residential housing starts	June	83.3	87.9	119.3	May	129.5	106.1	150.5
Residential expenditures	May	147.3	144.6	189.0	May	214.2	203.6	254.4
Nonresidential expenditures	May	163.2	161.9	173.2	May	142.8	145.7	143.1
Public expenditures	May	150.1	146.6	157.0	—	—	—	—
Public works and utilities	—	—	—	—	May	124.0	116.0	123.3
OTHER INDICATORS								
Deposits to demand deposits	May	317.5	316.5	308.7	—	—	—	—
Bank debits	—	—	—	—	May	340.4	337.1	302.4
Personal income per capita (\$)	May	5,682.73	5,642.30	5,364.08	1974IV	5,369.90	5,323.24	5,215.89
Passenger car sales (thousands)	May	741	660	882	May	16.8	15.8	21.6
Bar to date (thousands)	May	3,332	2,591	3,842	May	81.5	64.7	98.7

*Current indicators are preliminary and subject to revision.
The technique used to calculate entrants into the labor force has been changed in accord with the Bureau of Labor Statistics.

SOURCE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations

from R. L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Subscriptions to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

Spendable Average Weekly Earnings by County (third quarter, 1974)

(Editor's Note—This series is produced from data provided by the Indiana Employment Security Division. It is derived by deducting federal income taxes and social security taxes from gross average weekly earnings for each county.)

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings (In Thousands)	% Change Since Last Quarter
		All	Manu-Facturing	All	% Change Since Last Quarter	Manu-Facturing	% Change Since Last Quarter		
Adams	7,819	165.01	183.08	142.42	8.4	156.46	7.6	1,113,543	
Allen	121,236	193.37	246.57	164.49	3.5	205.98	5.3	19,941,940	
Bartholomew	27,797	224.98	264.61	189.14	6.8	220.01	6.9	5,257,710	
Benton	1,779	165.71	133.28	142.94	10.8	117.96	10.6	254,245	
Blackford	3,808	165.11	195.11	142.49	9.1	165.85	13.2	542,555	
Boone	5,689	143.98	175.12	126.29	4.9	150.25	6.6	718,425	
Brown	869	90.78	129.37	84.34	9.0	114.90	-15.8	73,292	
Carroll	2,735	136.97	135.02	120.84	6.4	119.32	6.7	330,543	
Cass	11,776	167.01	192.10	143.93	4.4	163.50	6.4	1,694,942	
Clark	21,355	164.09	201.92	141.72	7.3	171.16	7.8	3,026,508	
Clay	2,976	136.13	151.99	120.19	7.9	132.47	5.9	357,712	
Clinton	7,323	149.61	164.79	130.63	10.4	142.25	10.0	956,634	
Crawford	609	119.83	97.11	107.45	-1.1	89.41	-6.8	65,470	
Daviess	5,000	131.93	154.46	116.90	8.1	134.38	6.2	584,478	
Dearborn	7,140	190.85	235.15	162.52	7.5	197.08	9.2	1,160,468	
Decatur	5,066	165.25	196.89	142.60	8.8	167.23	7.9	722,341	
Dekalb	8,978	165.36	192.88	142.68	4.5	164.11	3.8	1,280,916	
Delaware	39,692	190.85	248.88	162.52	4.4	207.78	5.2	6,450,917	
Dubois	12,403	149.75	162.68	130.74	5.7	140.66	6.7	1,621,595	
Elkhart	54,553	182.94	208.84	156.35	5.6	176.56	7.8	8,529,484	
Fayette	11,972	176.80	195.79	151.56	-4.6	166.38	-6.1	1,814,575	
Floyd	11,373	151.63	169.13	132.19	4.7	145.58	10.8	1,503,382	
Fountain	3,975	146.32	166.19	128.10	7.0	143.30	7.9	509,138	
Franklin	1,535	126.53	148.85	112.68	6.5	130.05	6.5	172,969	
Fulton	4,726	157.11	164.79	136.42	0.5	142.25	5.8	644,677	
Gibson	6,250	156.99	203.47	136.33	9.9	172.37	11.8	852,049	
Grant	27,148	184.55	215.01	157.61	4.9	181.37	3.9	4,278,717	
Greene	3,700	122.36	122.22	109.42	0.7	109.31	-10.8	404,834	
Hamilton	11,631	167.69	197.39	144.46	3.9	167.62	3.2	1,680,145	
Hancock	5,394	163.87	229.11	141.56	7.3	192.37	7.9	763,613	
Harrison	3,273	138.14	153.32	121.76	8.1	133.50	9.5	398,309	
Hendricks	6,193	151.73	168.81	132.27	-0.3	145.33	-2.8	819,102	
Henry	10,610	185.99	252.44	158.73	2.8	210.47	6.3	1,684,202	
Howard	35,694	222.64	274.60	187.32	6.5	227.80	8.6	6,686,234	
Huntington	10,586	144.38	159.60	126.60	6.6	138.34	5.8	1,340,221	
Jackson	8,937	151.54	163.66	132.12	7.5	141.40	8.4	1,180,740	
Jasper	4,262	145.86	150.49	127.74	3.0	131.31	6.5	544,475	
Jay	6,423	155.44	176.06	135.13	4.8	150.99	4.9	867,998	
Jefferson	8,011	153.03	170.43	133.27	5.9	146.60	8.9	1,067,603	
Jennings	3,731	138.73	159.65	122.22	-2.6	138.39	1.7	456,034	
Johnson	12,435	147.02	197.18	128.64	3.7	167.46	6.2	1,599,545	
Knox	9,077	147.63	199.17	129.11	4.2	169.01	3.5	1,171,943	
Kosciusko	16,367	166.57	196.10	143.59	6.5	166.62	5.5	2,350,142	
Lagrange	3,959	157.08	178.58	136.40	2.9	152.95	-0.3	539,951	
Lake	182,237	235.04	291.10	196.99	4.7	240.67	5.4	35,899,020	
LaPorte	34,150	172.27	197.57	148.03	4.7	167.76	6.7	5,055,196	
Lawrence	7,966	176.80	213.30	151.56	3.7	180.03	2.8	1,207,409	

County	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																		
Adams	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	15.00	15.50	16.00	16.50	17.00	17.50	18.00	18.50	19.00	19.50	20.00	20.50	21.00	21.50	22.00	22.50	23.00	23.50	24.00	24.50	25.00	25.50	26.00	26.50	27.00	27.50	28.00	28.50	29.00	29.50	30.00	30.50	31.00	31.50	32.00	32.50	33.00	33.50	34.00	34.50	35.00	35.50	36.00	36.50	37.00	37.50	38.00	38.50	39.00	39.50	40.00	40.50	41.00	41.50	42.00	42.50	43.00	43.50	44.00	44.50	45.00	45.50	46.00	46.50	47.00	47.50	48.00	48.50	49.00	49.50	50.00	50.50	51.00	51.50	52.00	52.50	53.00	53.50	54.00	54.50	55.00	55.50	56.00	56.50	57.00	57.50	58.00	58.50	59.00	59.50	60.00	60.50	61.00	61.50	62.00	62.50	63.00	63.50	64.00	64.50	65.00	65.50	66.00	66.50	67.00	67.50	68.00	68.50	69.00	69.50	70.00	70.50	71.00	71.50	72.00	72.50	73.00	73.50	74.00	74.50	75.00	75.50	76.00	76.50	77.00	77.50	78.00	78.50	79.00	79.50	80.00	80.50	81.00	81.50	82.00	82.50	83.00	83.50	84.00	84.50	85.00	85.50	86.00	86.50	87.00	87.50	88.00	88.50	89.00	89.50	90.00	90.50	91.00	91.50	92.00	92.50	93.00	93.50	94.00	94.50	95.00	95.50	96.00	96.50	97.00	97.50	98.00	98.50	99.00	99.50	100.00

				INDICATORS						
County	Employment	Average Weekly Earnings		1974 2d Qtr.	Percentage Change at Annual Rates			lay 974		
		All	Manu- Facturing		1975 2d. Qtr.	1975 1st Qtr.	1974 2d Qtr.			
Alison	46,520	210.69	262.10	1						
ion	336,323	198.74	249.17	1	1,383.8	4.8	-3.9	7.6	32.8	
shall	9,285	155.57	179.18	1	827.1	-0.3	-11.4	-1.6	51.3	
tin	1,606	152.51	159.39	1	872.6	4.0	4.0	4.0		
ni	6,634	137.01	152.13	1					19.0	
					304.4	9.0	10.0	11.4	45.9	
roe	29,301	153.61	160.01	1	869.1	11.4	8.0	14.3	65.1	
gmontery	2,269	182.17	231.14	1	211.8	-33.5	-63.2	2.5		
gan	4,848	139.00	175.23	1					30.1	
cton	2,424	125.45	135.34	1	135.4	-64.9	-50.8	48.3	52.3	
le	8,170	152.50	169.58	1	230.1	4.0	24.6	19.0		
					-2.8	-	-	-	48.2	
	278	101.45	87.50							
grige	3,974	128.91	125.48	1					14.3	
yn	1,012	122.11	165.95	1					14.0	
e	1,695	130.71	132.41	1						
ey	4,624	143.71	153.45	1					15.2	
									15.0	
	2,236	208.28	119.81	1					2.2	
or	25,830	226.95	296.28	1						
or	5,458	195.95	242.24	1	146.8	June	9.7	4.3	11.6	17.1
alki	1,960	148.27	167.47	1	160.3	June	19.8	6.5	4.6	12.9
atum	5,584	158.57	193.25	1	154.7	June	-1.7	4.3	0.2	
										0.5
arolph	8,283	171.05	189.32	1	280.0	June	19.8	11.4	10.9	7.6
ify	5,266	169.44	208.35	1	597.1	June	20.5	14.0	11.7	
u	2,985	154.62	203.36	1	395.0	May	461.5	-26.3	20.2	2.3
seph	81,964	184.41	231.93	1						0.8
oo	3,364	140.99	156.26	1	241.3	May	16.1	11.4	14.0	7.6
					58.9	May	-	-	-	
					8.9	June	-	-	-	2.1
ey	8,448	153.43	167.55	1	11.5	June	-	-	-	0.7
eer	2,230	128.95	151.42	1						
ar	2,944	142.00	172.55	1						
uen	5,179	141.81	174.75	1						
illan	2,736	158.68	148.23	1						
withrland	855	125.98	130.39	1						
ppanoe	39,753	177.05	229.83	1						
ptu	2,542	172.20	207.72	1						
nic	597	146.46	181.83	1						
erburgh	69,628	178.57	206.99	1						
onlion	2,767	178.52	206.67	1						
ago	39,608	167.85	191.98	1						
aba	11,443	156.23	176.73	1						
arre	1,134	170.40	221.34	1						
arrik	7,458	242.13	302.12	2						
ashington	4,086	125.98	131.25	1						
ayn	26,617	170.09	207.70	1						
ells	6,022	165.51	195.12	1						
hite	5,303	142.88	151.23	1						
hith	5,743	156.12	173.83	1						
ot Cssiified	46,612	215.68	242.87	1						

A. = Not available.

210.69	262.10	178.00	-0.9	218.05	-3.8	8,280,536	-0.7
198.74	249.17	168.68	4.8	208.00	6.4	56,730,022	3.9
155.57	179.18	135.23	5.9	153.42	5.1	1,255,586	-1.8
152.51	159.39	132.87	11.5	138.18	9.9	213,347	6.8
137.01	152.13	120.87	5.0	132.58	5.9	801,914	4.0
153.61	160.01	133.72	1.5	138.66	4.6	3,918,133	-5.9
182.17	231.14	155.75	2.2	193.95	-0.5	1,443,619	0.2
139.00	175.23	122.43	8.0	150.34	5.9	593,493	1.6
125.45	135.34	111.84	2.5	119.57	7.4	271,061	6.8
152.50	169.58	132.86	6.7	145.93	5.6	1,085,453	-3.3
101.45	87.50	92.89	-1.9	81.71	4.7	25,855	-16.7
128.91	125.48	114.54	-0.9	111.86	-14.6	455,195	-6.6
122.11	165.95	109.23	10.0	143.12	16.2	110,503	5.4
130.71	132.41	115.95	7.9	117.28	1.6	196,574	1.7
143.71	153.45	126.08	4.7	133.60	2.1	582,962	-3.0
208.28	119.81	176.12	4.6	107.43	-5.8	393,742	-1.7
226.95	296.28	190.68	4.3	244.71	5.3	4,925,354	5.0
195.95	242.24	166.50	8.3	202.61	7.8	908,762	9.3
148.27	167.47	129.60	0.3	144.29	-0.8	254,060	0.9
158.57	193.25	137.55	2.3	164.39	-1.3	768,061	-0.1
171.05	189.32	147.08	3.2	161.33	3.1	1,218,304	-2.2
169.44	208.35	145.82	10.9	176.17	13.2	767,856	9.6
154.62	203.36	134.50	11.3	172.28	16.4	401,525	5.5
184.41	231.93	127.50	4.7	194.57	6.3	12,909,314	3.2
140.99	156.26	123.98	0.0	135.76	-0.8	417,040	-8.6
153.43	167.55	133.58	7.4	144.35	7.5	1,128,539	2.5
128.95	151.42	114.57	6.2	132.03	9.7	255,539	7.1
142.00	172.55	124.77	12.2	148.25	14.6	367,373	7.6
141.81	174.75	124.62	3.9	149.97	0.5	645,430	-3.2
158.68	148.23	137.63	11.5	129.57	22.3	376,560	1.3
125.98	130.39	112.25	9.9	115.70	12.1	96,014	5.4
177.05	229.83	151.76	3.4	192.93	7.4	6,032,876	1.7
172.20	207.72	147.98	12.5	175.68	12.8	376,106	6.1
146.46	181.83	128.20	12.7	155.49	6.9	76,495	6.8
178.57	206.99	152.94	6.1	175.11	4.9	10,649,176	4.5
178.52	206.67	152.91	2.3	174.86	-1.4	423,090	-0.4
167.85	191.98	144.58	2.3	163.40	2.8	5,726,595	2.0
156.23	176.73	135.74	6.7	151.51	7.1	1,553,335	3.6
170.40	221.34	146.57	5.4	186.31	100.0	166,262	8.2
242.13	302.12	202.52	2.5	249.26	2.2	1,510,472	-0.7
125.98	131.25	112.25	6.4	116.37	7.0	458,667	4.5
170.09	207.70	146.33	3.4	175.67	2.3	3,894,822	0.7
165.51	195.12	142.79	5.3	165.85	4.0	859,934	2.5
142.88	151.23	125.46	10.9	131.88	11.4	665,318	2.7
156.12	173.83	135.66	9.3	149.25	12.1	779,121	3.1
215.68	242.87	181.89	6.3	203.10	2.7	8,478,336	2.2

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	May 1975	April 1975	May 1974	REPORTING CITIES	May 1975	April 1975	May 1974
ANDERSON				FRANKFORT			
BD*	156.1	158.2	160.6	CUC	1,176.3	1,169.5	282.8
CUC†	803.8	777.2	342.1	IES	141.7	163.5	161.3
IES‡	133.1	135.4	143.4	GARY			
BEDFORD				BD	259.4	250.0	219.0
CUC	355.1	338.4	163.5	CUC	449.4	328.3	245.9
IES	121.8	110.9	114.4	IES	91.7	144.5	165.1
BLOOMINGTON				GOSHEN			
BD	295.4	285.2	249.8	BD	219.7	189.8	130.1
CUC	644.4	676.5	217.5	IES	142.0	140.2	162.3
IES	90.4	120.9	104.3	HAMMOND §			
COLUMBUS				IES	153.2	143.0	148.2
BD	330.2	253.1	145.2	HUNTINGTON			
CUC	467.3	394.9	69.2	CUC	1,745.5	1,665.8	174.3
IES	144.3	148.6	156.9	IES	122.7	122.6	134.0
CONNERSVILLE				INDIANAPOLIS			
BD	195.6	199.9	188.2	BD	493.6	496.4	245.2
CUC	759.5	769.0	276.2	CUC	560.1	607.9	245.0
IES	116.6	99.6	152.8	IES	139.9	135.3	142.2
CRAWFORDSVILLE				JEFFERSONVILLE			
BD	242.0	258.3	235.8	BD	248.0	292.3	437.1
CUC	1,322.6	1,203.3	275.9	IES	121.7	121.5	142.9
IES	145.5	146.7	158.3	KOKOMO			
EAST CHICAGO				CUC	900.4	919.2	560.5
BD	161.2	338.5	213.0	IES	143.6	133.1	187.6
CUC §	382.3	306.5	137.1	LAFAYETTE			
IES	102.1	101.8	109.3	BD	196.8	221.2	212.3
ELKHART				CUC	1,098.4	935.8	390.8
BD	229.9	210.5	223.3	IES	142.0	145.6	167.6
CUC	940.2	988.2	488.5	LA PORTE			
IES	139.9	159.8	148.5	CUC	752.2	649.4	182.1
EVANSVILLE				IES	178.0	180.7	160.7
BD	188.0	219.1	195.2				
CUC	526.5	467.3	151.7				
IES	115.5	105.8	109.9				
FORT WAYNE							
BD	255.6	253.2	256.2				
CUC	1,235.3	915.2	187.3				
IES	98.4	94.3	127.6				

*Bank Debits.
†CUC = Continued Unemployment Claims.
‡ = Industrial Electricity Sales.
§Continued Unemployment Claims of
East Chicago and Hammond are combined.

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	May 1975	April 1975	May 1974	REPORTING CITIES	May 1975	April 1975
LOGANSPORT				PERU		
BD*	328.4	335.6	279.3	BD	263.3	249.2
CUC†	514.1	454.0	196.6	CUC	405.2	317.8
IES‡	193.7	164.4	198.9	IES	165.3	169.0
MADISON				RICHMOND		
BD	185.0	183.0	222.5	BD	181.1	173.6
CUC	447.5	390.4	154.0	CUC	737.8	549.1
IES	114.8	112.2	130.5	IES	195.2	204.0
MARION				SEYMOUR		
BD	165.4	165.2	200.1	BD	327.6	316.1
CUC	606.2	516.4	321.3	CUC	332.1	223.1
IES	107.6	107.2	118.9	IES	83.4	85.0
MICHIGAN CITY				SOUTH BEND		
BD	252.3	255.6	219.5	BD	203.5	202.5
CUC	668.7	626.8	168.8	CUC	524.8	473.3
IES	167.7	164.1	181.5	IES	96.7	104.0
MISHAWAKA				TERRE HAUTE		
BD	121.9	122.0	233.6	BD	246.5	233.3
IES	129.9	126.2	103.1	CUC	411.6	362.2
MUNCIE				IES	144.0	151.6
BD	206.2	220.9	180.5	VALPARAISO		
CUC	395.5	415.5	123.3	CUC	546.4	445.7
IES	95.2	96.0	116.2	IES	157.9	163.0
NEW ALBANY				VINCENNES		
BD	499.5	402.6	428.1	BD	232.1	236.4
CUC	817.1	778.6	288.1	CUC	428.2	312.9
IES	95.5	98.8	101.9	IES	90.0	123.1
NEW CASTLE				WABASH		
BD	220.9	243.4	240.1	BD	192.7	213.5
CUC	611.7	625.4	206.0	CUC	442.4	493.7
IES	119.6	127.7	158.8	IES	118.4	122.4

*Bank Debits.
† CUC = Continued Unemployment Claims.
‡ = Industrial Electricity Sales.

INDIANA IN PERSPECTIVE

Union Hourly Basic Wage Rates in Construction Trades, April 1, 1975*

	Chicago	Cincinnati	Evansville	Indianapolis	Louisville	South Bend
Bricklayers	\$ 9.70	\$9.70	\$8.83	\$8.89	\$ 8.88	\$8.94
Carpenters	9.65	9.75	8.85	8.95	8.75	8.33
Electricians	10.25	9.20	9.60	8.88	10.38	9.15
Painters	8.10	8.73	7.75	7.70	7.59	7.63
Plasterers	9.30	9.20	9.88	8.60	8.65	8.27
Plumbers	9.82	9.92	8.85	8.65	10.54	8.80
Laborers	7.20	8.45	6.40	6.40	6.40	6.95

*Basic rate excludes employer contributions for insurance, pension, vacation pay, and other fringe benefits.

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Graduate School of Business
Indiana University
Bloomington, Indiana 47401
August 1975

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	May 1975	April 1975	May 1974	REPORTING CITIES	May 1975	April 1975
PORT	328.4	335.6	279.3	PERU		
	514.1	454.0	196.6	BD	263.3	249.2
	193.7	164.4	198.9	CUC	405.2	317.8
				IES	165.3	169.0
	185.0	183.0	222.5	RICHMOND		
	447.5	390.4	154.0	BD	181.1	173.6
	114.8	112.2	130.5	CUC	737.8	549.1
				IES	195.2	204.0
	165.4	165.2	200.1	SEYMOUR		
	606.2	516.4	321.3	BD	327.6	316.1
	107.6	107.2	118.9	CUC	332.1	223.1
				IES	83.4	85.0
	252.3	255.6	219.5	SOUTH BEND		
	668.7	626.8	168.8	BD	203.5	202.5
	167.7	164.1	181.5	CUC	524.8	473.3
				IES	96.7	104.0
	121.9	122.0	233.6	TERRE HAUTE		
	129.9	126.2	103.1	BD	246.5	233.3
				CUC	411.6	362.2
	206.2	220.9	180.5	IES	144.0	151.6
	395.5	415.5	123.3	VALPARAISO		
	95.2	96.0	116.2	CUC	546.4	445.7
				IES	157.9	163.0
	499.5	402.6	428.1	VINCENNES		
	817.1	778.6	288.1	BD	232.1	236.4
	95.5	98.8	101.9	CUC	428.2	312.9
				IES	90.0	123.1
	220.9	243.4	240.1	WABASH		
	611.7	625.4	206.0	BD	192.7	213.5
	119.6	127.7	158.8	CUC	442.4	493.7
				IES	118.4	122.4

*Bank Debits.

† CUC = Continued Unemployment Claims.

* = Industrial Electricity Sales.

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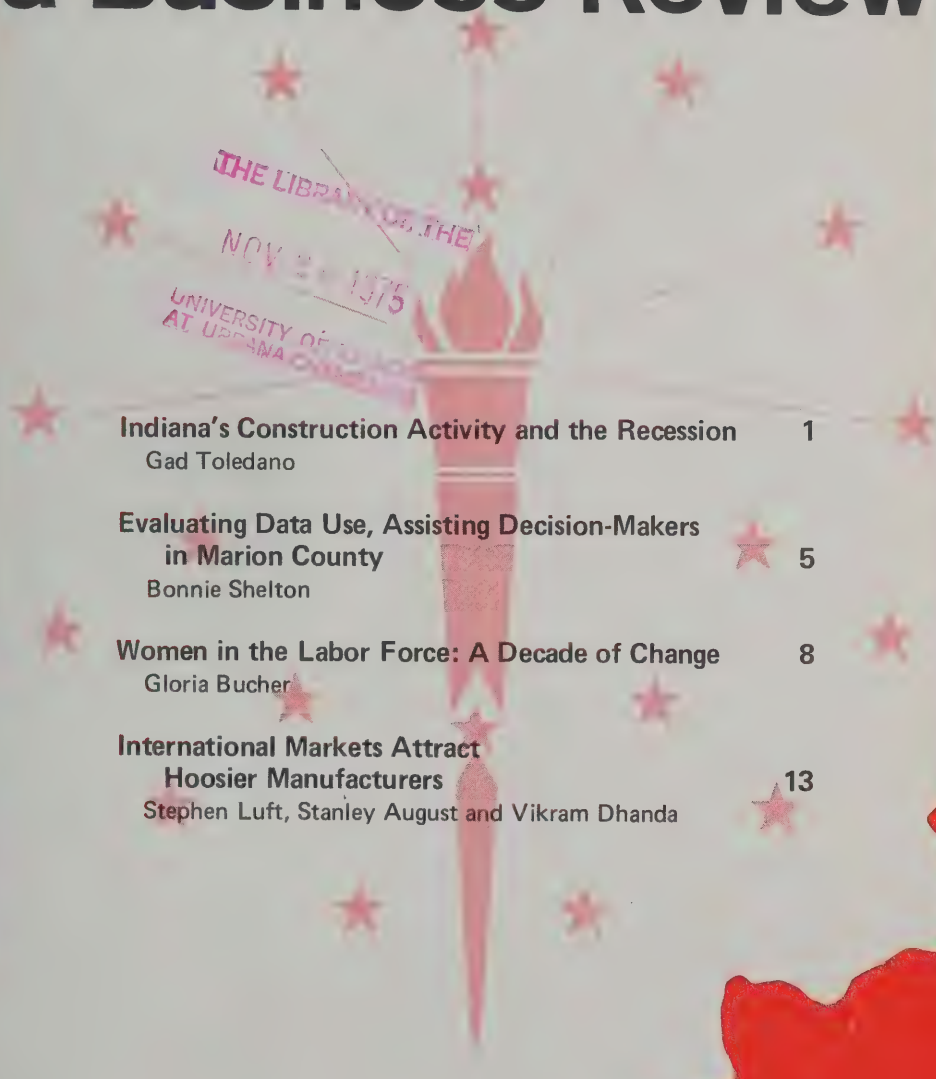
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- 
- Indiana's Construction Activity and the Recession** 1
Gad Toledano
- Evaluating Data Use, Assisting Decision-Makers
in Marion County** 5
Bonnie Shelton
- Women in the Labor Force: A Decade of Change** 8
Gloria Bucher
- International Markets Attract
Hoosier Manufacturers** 13
Stephen Luft, Stanley August and Vikram Dhanda

on of Research/School of Business/Indiana University



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SEPTEMBER-OCTOBER 1975

Indiana's Construction Activity and the Recession

AD TOLEDANO

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The construction industry is one of the most significant indicators of the state of the economy. The importance of the industry is reflected only to a limited extent by those factors which are integral parts of the industry, such as total employment and investments within the industry. Its overall importance stems from the consequent demands it creates for the output of other industries such as utilities, furniture, equipment and appliances, and public services.

Indiana's construction activity was markedly affected by the recent recession. From the third quarter of 1973 through the second quarter of 1975, it generally followed the national pattern of a two-stage recession, but differed from the nationwide activity in two important respects. In the first place, construction activity in Indiana seemed to be *more sensitive* to changes in the economy than was the industry nationwide. Furthermore, there seemed to be a *lag* between the industry's reaction to economic developments on the national level and the reaction of the state's industry to the

same developments. During the period studied, Indiana, in most cases, reached the peaks and troughs of the cycle one quarter after the nation.

Construction activity in the state began to decrease during the fourth quarter of 1973 at a much faster rate than the nationwide decline (see Figure 1). The lowest level within the first stage of the recession, \$196.6 million as a monthly average, was reached in the second quarter of 1974 (see Table 1). Nationwide construction expenditures hit bottom one quarter earlier. Toward the end of the second quarter, and during the first two months of the third quarter of 1974, construction activity in the state increased at an accelerated rate, reaching its maximum level of \$206.8 million during August 1974. The corresponding increase nationwide was at a much slower rate, and again the nation's top level was reached one quarter earlier.

Beginning at the fourth quarter of 1974, Indiana's construction activity began to drop sharply. It reached a level of \$179.2 million as a

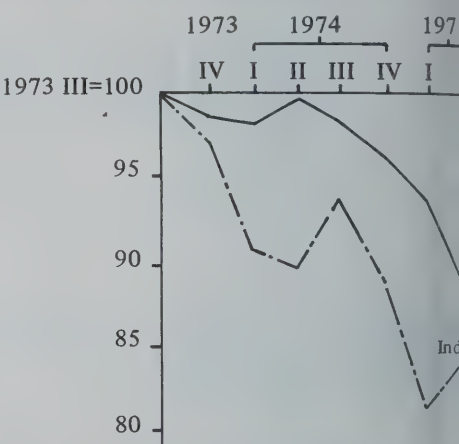
monthly average the first quarter of 1975. This figure represents an 18.3% drop from the prerecession level of 1973 III, compared to a 6.6% drop between the same quarters nationwide. However, if the construction expenditures in the state are to be examined in real terms, that is, excluding that part which represents the increase in construction costs (using U.S. Department of Commerce cost composite as a deflator), the drop is far greater: 31.8%. This is the result of the 19.8% increase in construction costs between the third quarter of 1973 and the first quarter of 1975.

During the second quarter of 1975, construction expenditures in the state showed signs of recovery, averaging \$184.6 million. And in July, at the start of the third quarter, expenditures reached \$193.5 million. Despite the slight improvement, second quarter figures were still 15.8% below 1973 III figures. Nationwide, where the drop continued during the second quarter of 1975, second quarter figures were 11.6% below the prerecession level.

CONSTRUCTION EXPENDITURES

An appraisal of the components of construction expenditures in the state reveals that although there was a sharp drop in residential expenditures and expenditures on public works and utilities, nonresidential expenditures remained nearly constant in nominal dollars (see Figure 2). Figure 2 can be better interpreted by taking

FIGURE 1
Total Construction Activity, Indiana and United States, 1973 III–1975 II*



*Seasonally adjusted indexes, based on current dollars, 1973 III=100

TABLE 1

Indiana Total Construction Activity, 1973 III–1975 II†

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1973			\$219,194	\$213,194
1974	\$198,553	\$196,645	205,214	194,194
1975	179,236	184,581		

†Quarterly averages of monthly rates, seasonally adjusted (in thousands of current dollars)

SOURCE: Dodge Construction Potentials, Regional Bulletin, F.W. Dodge Division, McGraw-Hill Information Systems Company, New York, N.Y.

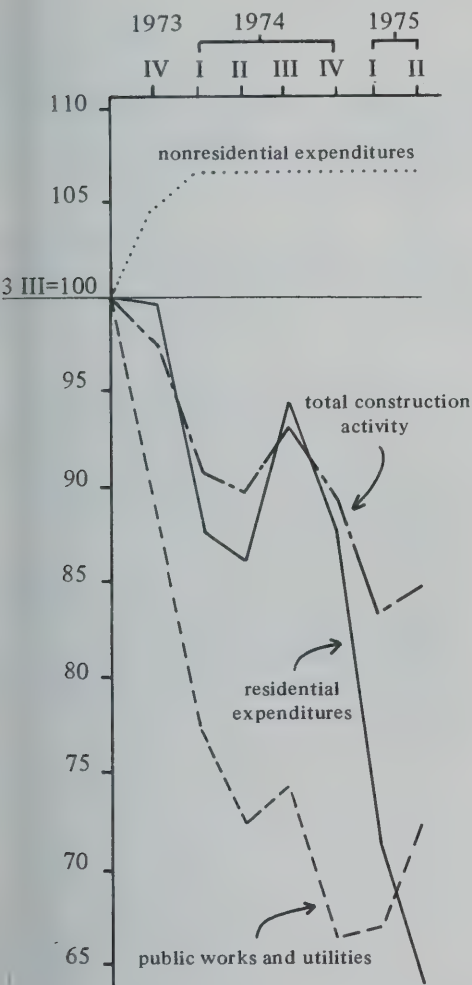
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FIGURE 2

Components of Indiana's Construction Industry, 1973 III-1975 II*



*Seasonally adjusted indexes, 1973 III=100

to account the relative weight of each component. Residential expenditures accounted for 71% of total construction expenditures in the beginning of the period studied (1973 III), and the relative importance decreased to 38% by the end of the period studied (1975 I). Nonresidential expenditures, which were 30% of the

total construction expenditures in the state, increased to 41% by 1975 II. Public works expenditures accounted for 22% in the beginning of the period and were about the same proportion of expenditures by the end of the period studied.

During the beginning of the period, when residential expenditures constituted the lion's share of total construction expenditures, the total expenditure curve tended to follow the residential expenditures curve. Toward the end of the period, when the relative weight of residential expenditures decreased markedly, the effects of the other two curves became more significant.

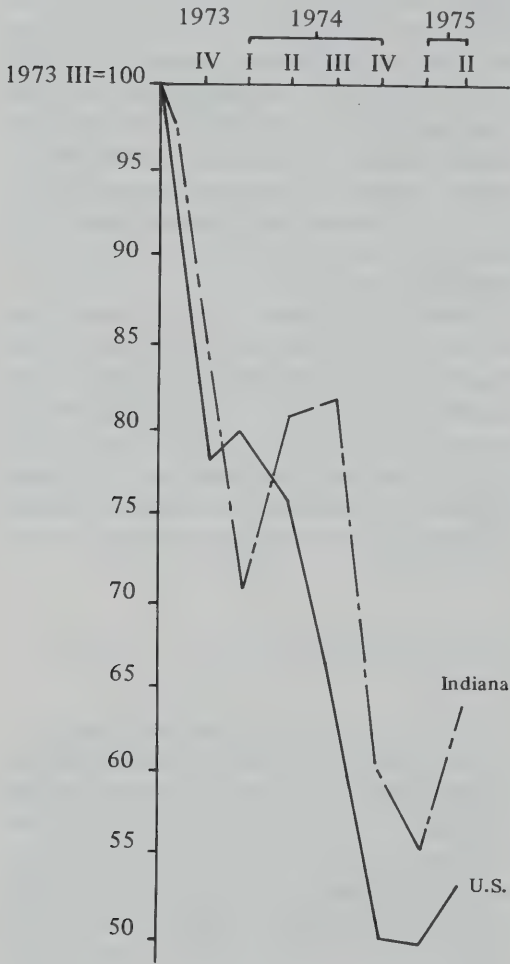
Since the increase in total construction expenditures in the state during the second quarter of 1975 was primarily a result of the increase in public works and utilities expenditures, it should not be considered as a turning point in the state of the industry. Public works expenditures are often a function of institutional decisions that do not represent trends of the open market.

HOUSING STARTS

One of the most significant indicators of the housing industry's status is the number of housing starts. The two differences between Indiana's reactions and nationwide reactions are valid here as well. Table 2 shows that residential starts in Indiana reached the bottom (2,846 units on a monthly average) during the first stage of the recession in the first quarter of 1974, one quarter after the total industry nationwide reached its minimum level. In both cases, the bottom level in housing starts was followed the next quarter by a bottom level in total construction activity (see Figure 3). During the next two quarters, 1974 II and III, a notable rise in housing starts was recorded, a rise which signaled the end of the first stage of the recession for the state's construction industry. This rise, starting a quarter after the nationwide rise, occurred at an accelerated rate.

FIGURE 3

Housing Starts, Indiana and the United States, 1973 III-1975 II*



*Seasonally adjusted indexes, 1973 III=100 (U.S. figures are for private housing starts only)

The rise brought Indiana's housing starts to a relatively better position than the nation's. However, in absolute terms, this was an extremely poor position: housing starts during the first quarter of 1975 were down 44.9% compared with the 1973 third quarter level. Nationwide, housing starts dropped 50.5% in the same period.

TABLE 2

Indiana Private and Public Residential Starts, 1973 III-1975 II†

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1973			\$4,030	\$3,510
1974	\$2,846	\$3,258	3,310	2,410
1975	2,220	2,577		

†Quarterly averages of monthly rates, seasonally adjusted

SOURCE: Dodge Construction Potentials, Regional Bulletin, F.W. Dodge Division, McGraw-Hill Information Systems Company, New York, N.Y.

The slight increase in the number of housing starts during the second quarter of 1975 may be of significance for the future. Since World War II, housing starts have risen well before the end of recessions, excluding the mini-recession of 1960-61.

Both drops in housing starts, in Indiana as well as nationwide, were larger than those in total construction activity. Presumably, this is in part a result of the necessity to complete projects begun before the recession, and of the recession's effects upon expectations.

Construction is a major economic activity in Indiana. Nearly 6% of income in 1974 was earned in contract construction. The \$1.3 billion earned in contract construction this year compares with \$758 million earned in farming and \$1.4 billion in transportation, communication and public utilities. But the significance of construction goes beyond the immediate income it generates. Many complementary purchases accompany each construction effort, whether in the residential or non-residential area. In the long run, both the productivity of business and the comfort of families are functions of construction activity. A more detailed understanding of this highly segmented industry requires improved information about the industry itself and its linkage with the national economy.

Evaluating Data Use, Assisting Decision-Makers in Marion County

ANNIE SHELTON

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How do citizens in their private and public roles use information they need to guide them in their personal and civic decision making? To what extent are needed data available? How do businessmen, government officials and individuals apply relevant statistics in problem-solving situations?

Those questions are the focus of a unique census use study being conducted in Indianapolis under terms of an agreement between the city and the United States Census Bureau. John Rowe, director of the Unified Statistical Evaluation Study, explains, "The taxpayers have not been getting an adequate return on the considerable investment which goes into gathering information about the population. The data which the Census Bureau gathers are in the public domain, but getting information out of Indianapolis is often difficult and time consuming. This pilot project reflects a growing movement in the Census Bureau that the amount of red tape involved in getting statistics ought to be reduced so that units of government and also the private sector can be better equipped with decision-making data."

When the Unified Statistical Evaluation Study (USES) began three years ago, its data base consisted of all information pertaining to Marion County which was gathered during the 1970 censuses of population and housing. To

that base it has added results of various surveys, one-time reports and ongoing census studies. With this broad core of data, USES has been able to answer nearly 2,500 questions from individuals and institutions seeking information about the county's population.

IMPROVING PUBLIC SERVICES

Thirty-eight percent of the reports produced by USES have been in response to requests from government agencies. Twenty-nine percent of the questions received by the project office have come from businesses, 13% from social service organizations, 13% from academe, and 7% from private citizens. Data gathered as a result of these inquiries have been used in a variety of ways. For example, the Central Indiana Council on Aging asked the USES office to identify the sections of Marion County with the largest concentrations of senior citizens. That information supported a successful application for a federal grant under which twenty nutrition centers for senior citizens were established within the county.

The Indianapolis Public Schools wanted to offer basic adult education courses to persons who had not completed school beyond the

eighth grade. The USES office identified the ten neighborhoods which had the greatest number of persons with less than ninth grade educations, and remedial learning centers were established in those ten neighborhoods.

When the City-County Council authorized the establishment of twelve multi-service centers, the USES staff helped select the most appropriate sites for the centers and helped determine what combination of services (day care, activities for senior citizens, recreation, food stamp sales, employment counseling) was needed at each.

"We are constantly giving information to the city," Rowe remarked. "We can identify whether certain material exists, can find out where it is, and can get it for the officials quicker and cheaper than they could get the same data by going through traditional bureaucratic channels. We supply background material for planners, data for speeches, data for grant applications, and frequently clarify information pertaining to issues being debated by the City-County Council. Our presence has to some extent reduced the need for the city to hire outside consulting agencies."

PRIVATE CITIZENS BENEFIT

Though the Indianapolis city-county government is the most frequent user of the project's services, other sectors have benefited from the data available through USES. For instance, churches have sought information regarding income distribution of the population by neighborhoods; civic leagues have sought information to support requests for additional playgrounds; businesses have used data to plan store locations and plan advertising campaigns; real estate developers have obtained information regarding housing values, income levels and growth rates of specific areas.

Since all information handled by the Census Use Study office is a matter of public record, USES attempts to honor all requests for information. "If the requestor can define what it is

he wants, can tell us what he's after, we will to pull information together and prepare report," director Rowe says. "There is no limitation on who can request information at no charge for supplying the information. The only thing we require is an explanation of how the data will be used—what will be its practical application. This is, after all, to be a learning process for the Census Bureau. We are attempting to find out what information people want and need, and how they use it."

Predictably, most queries which are received by the census use study office relate to the number of persons living in specific areas. The requestors are interested in racial or ethnic balance—the proportion of blacks to whites, the percent of Spanish-speaking persons in a given neighborhood. Next in popularity are questions relating to income.

PROTECTING INDIVIDUALS

"We do not and cannot reveal information regarding the income of individuals," John Rowe emphasizes, "but we can release summaries of median incomes of persons in census tracts, or in regions. Commercial researchers find that information useful, as do government people who are looking for poverty pockets."

Names and addresses are never given out. Mailing lists are not produced, but Rowe notes that census demographics have been used as a basis for direct mail advertising campaigns, circular advertising and even for the placement of billboards. "I, personally, haven't received complaints that data from this office are put to such use," Rowe says, "but I can see that might be a concern of some persons when it comes time to fill out the census questionnaire in 1980. However, this one aspect of the data use is more than offset by the importance and value of its other uses. For instance, revenue sharing has made our data particularly significant, because federal money is tied precisely to what kind of count we have. This makes no difference whether individuals will pay

ces out of property taxes, local taxes, or
ugh revenue sharing. In the past, the Census
au has been accused of undercounting in
inner cities. We must let the population
w how important it is to properly respond
he census, because it affects the kinds of
ces which the federal government can
ply to these areas."

EXPANDING THE CENSUS

1980 census will undoubtedly be changed
result of the Indianapolis study, Rowe
ates. For instance, USES has discovered
there is a need for more information
gated at the township level. "In the
west, the township is a very important
-decisions are made at that level, and this
not been adequately taken into consider-
by the Census Bureau," Rowe says. Better
tics on handicapped persons should also be
ded in the census, he indicates, so that
nizations can more readily identify the
for specialized services.

An example of the kinds of questions which
be eliminated from the next census as a
t of the project are those relating to
employment. "By the time unemployment
gets released by the Census Bureau, it is so
ete it is no longer useful," Rowe re-
ted, indicating there are other agencies
h can more accurately and efficiently
lt and disseminate such information.

The more questions we ask on the census
r, the harder it is for the public to respond,
he less accurate their answers become,"
w explains. "Therefore, we believe the
onation would be more accurate if there
r somewhat fewer questions asked. Some
ions are mandated by Congress, of course,
others are included at the request of
his federal agencies, so the Census Bureau
bels under half the questions that appear
to census form."

The Indianapolis Census Use Study Office is
ly one of its kind currently operating in
ation. Indiana's capital was chosen for the

project for two reasons. "First, Indianapolis has
a strong government with a clear-cut chain of
command, and six strong cabinet members,"
Rowe explains. "Therefore, it's easy to identify
whom to go to on specific projects. Second, the
former director of the Census Bureau, George
Hay Brown, had been marketing manager for
the Ford Motor Company, which used
Indianapolis as a test city, and he considered
the city an excellent example of a cross section
of the American population."

EXPANDING THE STUDY

The agreement between the city and the Census
Bureau which established the Unified Statistical
Evaluation Study will be in effect through
1976. After that, the city's Department of
Metropolitan Development will take over some
of the functions of the present census study
office, which is now staffed by three federal
employees and six city employees.

"We have, of course, been dealing with data
relating only to Marion County," Rowe reiter-
ates. "However, discussions are underway with
Lt. Gov. Robert Orr about the possibility of
establishing a state level pilot project. The
Census Bureau is interested in such an under-
taking, because it would help us determine if
this is a useful enough function to warrant
similar agreements in other states." Rowe, an
employee of the Census Bureau, is convinced
that the Marion County project has fulfilled its
two major goals, that of supplying needed data
to local decision makers, and evaluating the use
of data in order to make future censuses more
efficient and effective.

NOTE: A publication titled
*Data-Information-Decisions: The Indianapolis
Experience*, which explains several case studies
completed by USES, is available by writing: USES,
1622 City-County Building, Indianapolis, IN 46204.
Detailed technical documentation of programs
requiring computer technology are also available.
Queries regarding the latter should be addressed to:
Data Access & Use Laboratory, Bureau of the Census,
Washington, D. C. 20233.

Women in the Labor Force: A Decade of Change

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Between 1960 and 1970, Indiana's labor force increased by over 336,000 workers. Women constituted 68% of that increase. Although numerous social and economic characteristics can enter into an analysis of labor force participation, this article will focus on the changes in age and marital status of women in the labor force from 1960 to 1970.

Whereas during the sixties the labor force participation rate for women increased in both the nation and Indiana, the 1960 rate in Indiana was 33.7%, lower than the national rate of 34.5%, and by 1970, the labor force participation rate for women in Indiana had risen to 40.3%, exceeding the national rate of 39.6%. This considerable increase of women in the Indiana labor force sharply contrasts with the decline in the labor force participation rate for men, from 78.5% in 1960 to 74.6% in 1970.

Women entered the state's labor force during the sixties at a higher rate than the female population increased. Women as a percent of Indiana's total labor force (fourteen years of age and older) increased 5.8% from 31.2% in 1960 to 37.0% in 1970, whereas women as a percent of Indiana's *total population* fourteen years or older increased only 1.5%, from 51.4% in 1960 to 52.9% in 1970. Because male labor force participation followed the opposite trend during the sixties, women have made relative gains in terms of the total labor force.

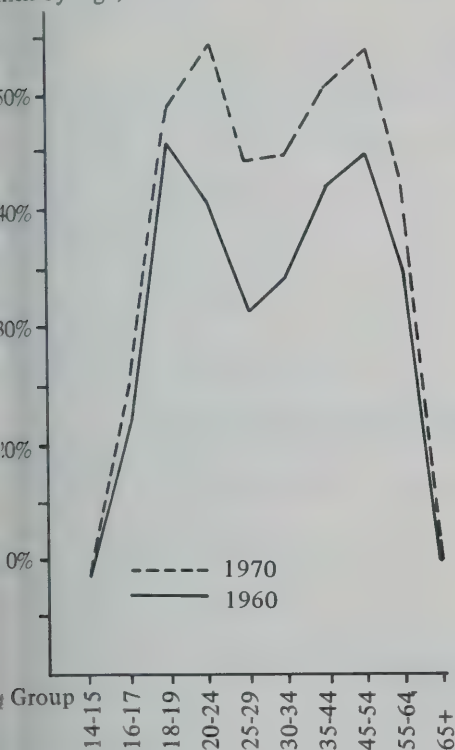
No sooner are changes noted than explanations are offered to account for them. Diverse demographers will attribute the increase in female labor force participation to the fact that more females are in the age categories which typically have high membership in the labor force. Others would suggest a combination of age and other demographic variables to account for the increase. Subscribers to various theories of emancipation would contend that the increase in labor force participation for women reflects major social change. Along with the rate data, increases in female employment in selected occupations are pointed to as complementary indicators of social change. This article will examine changes in both age distribution and marital status in order to determine to what extent these factors affected the increase in the number of women in the Indiana labor force in 1960 and 1970.

AGE DISTRIBUTION PATTERNS

Labor force participation rates by age group for women in Indiana in both 1960 and 1970 are presented in Figure 1. The labor force includes those who are working as well as those unemployed persons actively seeking work. Labor force participation rates for women in Indiana, as is true elsewhere, have a pattern of high rates for ages 18 through 24, with lower rates

FIGURE 1

Labor Force Participation Rates of Indiana Women by Age, 1960 and 1970



SOURCE: U.S. Bureau of the Census, *Census of the Population: 1960 and 1970*, Detailed Characteristics, Tables 116 and 165.

... 25-34, and again relatively high rates for ... 35-54. The 1970 labor force participation rates for women are higher than the 1960 rates in all but two age groups: 14 and 15, and 65 and over. The 1970 pattern differs from the 1960 rates in one other respect. The 1960 labor force participation rate for women 20-24 is lower than the rate for 18 and 19 year old women, whereas in 1970 the rate for women in the early twenties is higher than the preceding age group.

The extent to which the increase of women in the labor force from 1960 to 1970 was a result of more women in those age segments having high labor force participation rates can be isolated by assuming the 1960 labor force participation rates were still in effect in 1970, and applying these 1960 rates to the 1970

population for each respective age group. Any difference between the actual, observed change in the labor force for each segment and the number generated by applying the 1960 rates to the 1970 population can be attributed to factors other than an age distribution shift. Figure 2 illustrates the results of this procedure. For age group 14 and 15, the number of women in the labor force increased although the labor force participation rate declined for that segment. According to this analysis, the effect of the age composition difference is positive while the change due to "other factors" is negative. "Other factors" in this case might be the trend toward increased participation in school at that age. A positive age composition effect and a negative "other factors" effect is also indicated for women 65 and above. Although the population in that age segment increased, the labor force participation rate may have declined because "other factors" such as social security and private pension payments have increased. There were fewer women between the age of 35 and 44 in 1970 than in 1960, so the 1960 labor force participation rate applied to the 1970 population in that age group produces a negative age composition effect, although there was an absolute increase in the number of women in the labor force in this age segment. This increase must be attributed to factors other than age composition shift. For each age segment, the change in the labor force attributed to "other factors" might be explained by numerous socio-economic variables, the enumeration of which is beyond the scope of this article.

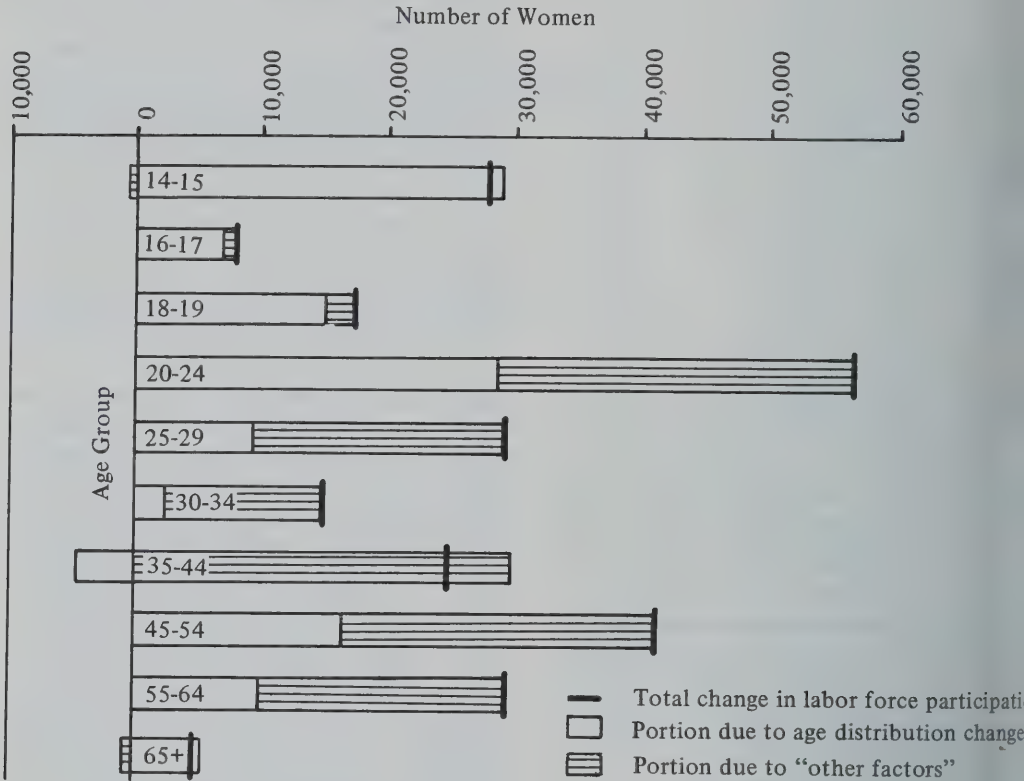
For all age groups, it can be seen in Figure 2 that the actual change in the labor force far exceeds the change predicted by applying the 1960 labor participation rates to the 1970 population age segments. In fact, the age-specific application of the 1960 rates "explains" only 34.7% of the actual increase in the number of women in the Indiana labor force by 1970.

MARITAL STATUS CHANGES

Labor force participation rates for Indiana women 16 years and over by marital status for 1960 and 1970 are presented in Figure 3. Labor

FIGURE 2

Effects of Age Composition and "Other Factors" on Labor Force Participation Change for Indiana Women, 1960 and 1970



SOURCE: U.S. Bureau of the Census, *Census of the Population: 1960 and 1970*, Detailed Characteristics, Tables 116 and 165.

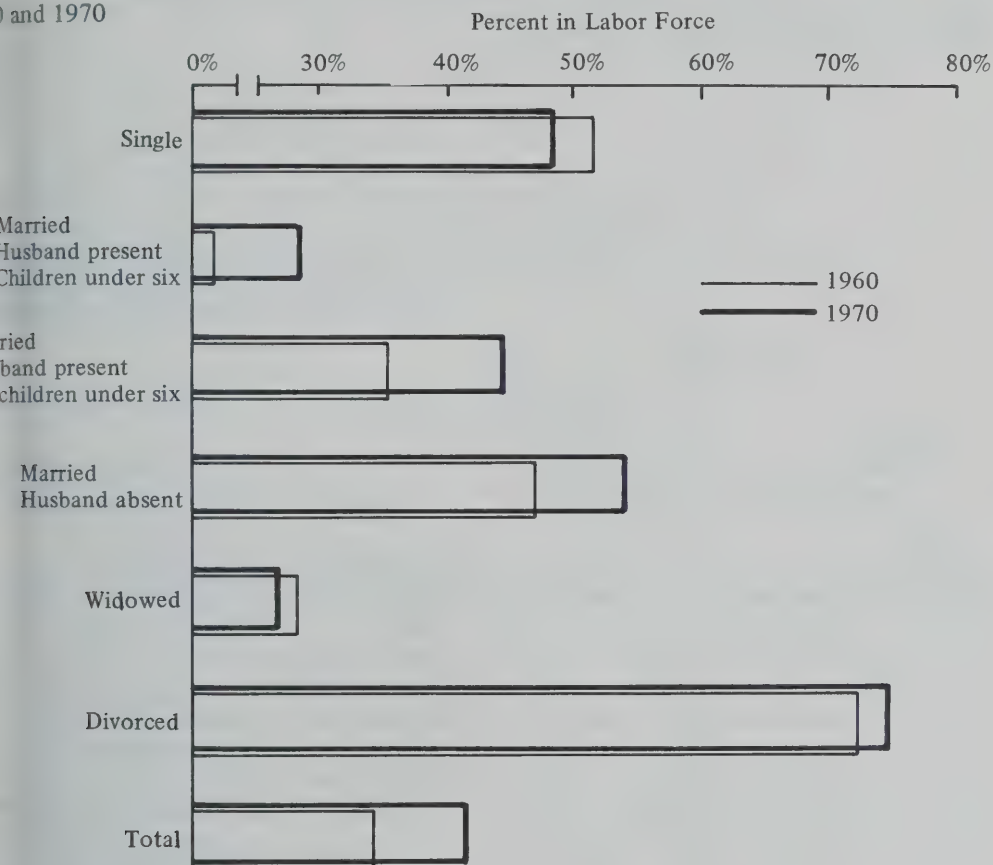
force participation rates for women are higher in 1970 than in 1960 for all marital status groups except single women and widows. The highest labor force participation rates belong to women most likely to be self-supporting: those women who are single, divorced, and married with spouse absent (most of the latter are separated from their husbands). Although the highest rates of labor force participation belong to women from these three groups, married women with spouse present continues to be the largest marital status category of women in the Indiana labor force, comprising 59% in 1960 and increasing to 60.5% in 1970. The number of women in each marital status category as a

percent of the total number of women in the Indiana labor force for 1960 and 1970 is presented in Figure 3. The married women with spouse present category is broken down into two segments based on the presence or absence of children under six years of age. The labor force participation rate for the combination of these two groups was 30.2% in 1960 and 40.3% in 1970.

The extent to which the increase in the number of women in the labor force can be attributed to changes in the marital status distribution of women in Indiana from 1960 to 1970 is determined by using a procedure analogous to the one used to establish the

URE 3

or Force Participation Rates of Indiana Women by Marital Status,
0 and 1970



OURCE: U.S. Bureau of the Census, *Census of the Population: 1960 and 1970*,
Detailed Characteristics, Tables 116 and 165.

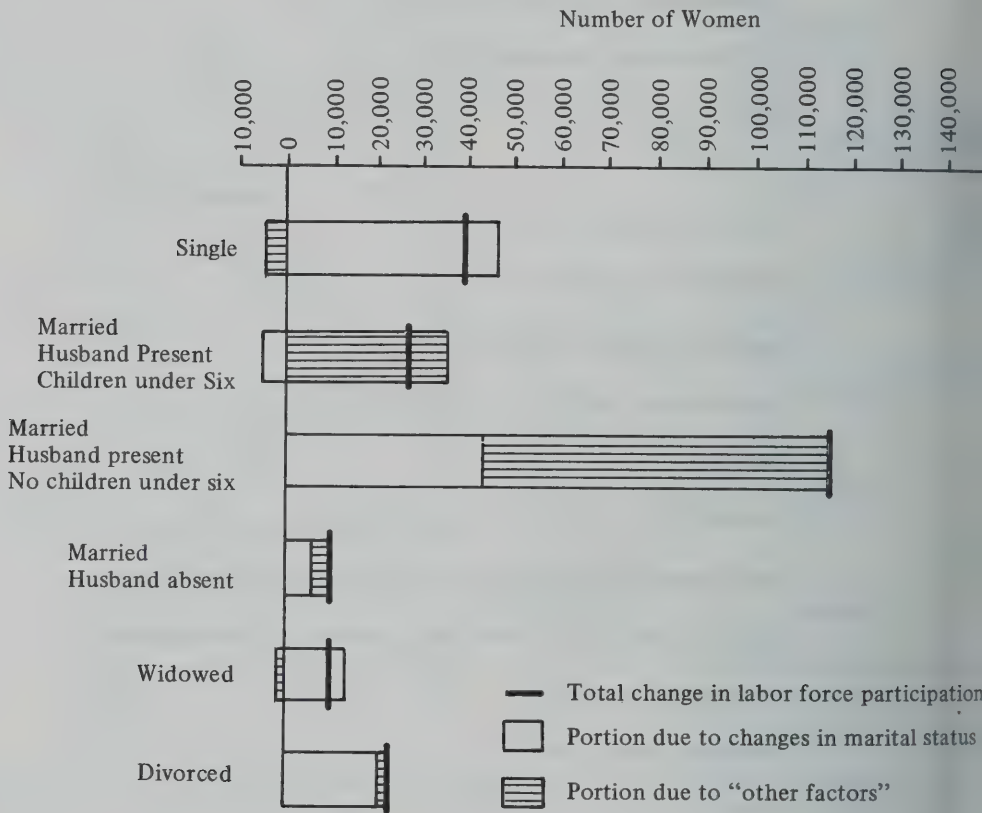
ets of age distribution shifts. By assuming
the labor force participation rates in 1960
each marital status were still in effect in
and by applying these rates to the 1970
the population segmented by marital status,
change in the number of women in the
the labor force accounted for by changes in the
ave sizes of marital status categories is
etermined. Figure 4 illustrates the portion of
actual change in the number of women in
Indiana labor force that can be attributed
changes in marital status distribution, along
the residual that must be attributed to
other factors." There were increases in the
number of single and widowed women during

the sixties, so the marital status distribution
effect is positive. However, the actual change in
the number of women in the labor force in
these categories is less than would have been
expected based on changes in marital status
alone, so it must be inferred that "other
factors" negatively influenced labor force par-
ticipation of women in these marital categories.

The opposite effect is evident for married
women with children under six years of age.
There were approximately 31,000 fewer wom-
en in this category in 1970 than in 1960, but
the number of women in the labor force in this
category increased by 28,000. The labor force
participation rate for this category increased

FIGURE 4

Effects of Marital Status and "Other Factors" on Labor Force Participation Change for Indiana Women, 1960 and 1970



SOURCE: U.S. Bureau of the Census, *Census of the Population: 1960 and 1970*, Detailed Characteristics, Tables 116 and 165.

from 19.3% to 29.5% in 1970, indicating that although the marital status effect was negative, "other factors" had a strong positive influence on labor force participation for this group.

For all marital status categories, the proportion of the actual change in the number of women in the labor force that is "explained" by applying the 1960 rates to the 1970 marital status populations is 53.2%. In other words, a little over half of the increase of 225,307 women in the labor force from 1960 to 1970 can be attributed to changes in the numbers of women in different marital categories.

This analysis suggests that changes in marital status have had a greater influence on female labor force participation in Indiana than changes in age distribution. This look at the extent to which two demographic variables "explain" the observed change in the number of women in the labor force is limited, thought-provoking. Further study of changes in women's labor force participation rates must also include an application of numerous other variables, such as changes in real wages, in level of education, and other secular changes.

International Markets Attract Hoosier Manufacturers

PHEN LUFT, STANLEY AUGUST AND VIKRAM DHANDA

authors are MBA students in Finance and International Business at Indiana University, Bloomington

Indiana is one of the top ten exporting states in the nation. It boasts a manufacturer which produces a highly sophisticated cutting and grinding machine that is used by almost every diamond chip maker in the world, and another manufacturer which produces the capital equipment used in making most of the western world's sealed headlights and television screens. This article will discuss the problems, attitudes and perceptions of Indiana firms relating to international trade.

A questionnaire sponsored by the U.S. Department of Commerce was mailed to 400 firms listed in the *Indiana International Trade Directory*. More than half the companies responded. Representatives of 100 of these firms were then chosen for personal interviews. The firms were chosen because of their geographical location in major industrial and population centers throughout the state, and because they were already involved in international trade, or the authors felt they had strong exporting potential.

The authors wish to acknowledge the assistance of the Indiana Departments of Commerce, and also Mel Sherar, Tom Hudson and Richard N. [unclear] for their help.

The interviews showed that products which require advanced technology are in great demand abroad, but the demand for relatively standard products ranging from machine tools to pipe fittings is also high. This demand for a wide variety of capital goods has resulted primarily from the tremendous industrial expansion in Latin America, the growing demand of other developing countries, the two devaluations of the U.S. dollar, and the ability of the U.S. manufacturer to modify his products for specific foreign markets.

Table 1 gives the product line breakdown for the firms involved in the study. This table, as well as others in the article, contains information derived exclusively from personal interviews conducted by the authors during the summer of 1975.

Table 2 lists the regions to which Hoosier manufacturers are exporting. Europe is still the largest customer for Indiana exports. Latin America is second, and this is due to the industrial expansion in Venezuela, Brazil, and Mexico, for which a wide range of capital equipment and related parts are needed.

Manufacturers were asked during the personal interviews to explain their inducements for engaging in international trade; the impetus

usually came from outside the firm. Their reasons for engaging in such trade are outlined in Table 3. Many of the initial ventures were generated by American and foreign export management companies which offered their marketing and product distribution networks abroad.

The significant factors in the development of international trade in Indiana were the expertise provided by U.S. export management firms and their foreign counterparts to market Hoosier products throughout the world, and the availability of good international marketing and trade data provided by the U.S. and Indiana Departments of Commerce. With these new insights into international trade, the manufacturer had some idea what areas were potentially strong enough to warrant development of its distribution network overseas. This is the first major step in penetrating foreign markets.

Initially, the direct exporting approach proved to be successful, but, with the import restrictions of the developing countries, manufacturers were forced to alter this approach. Firms with past experiences in international trade modified the products so they could be sold either as components or end products, depending upon the restrictions of the importing country. Different production and distribution methods were needed to offset the high import duties and quotas of the developing nations. Indiana manufacturers began establishing licensees, subsidiaries, and joint ventures abroad. The particular approach for internalizing export activities was based on several considerations. One was the size of the Indiana manufacturer, another the commitment of the company to international trade, and last, the legal restrictions of the foreign nation. Table 4 shows that about 20% of the Hoosier manufacturers interviewed have acquired subsidiaries or affiliates abroad.

At first, most firms regarded international trade as only a supplemental market to keep production lines at full capacity. If domestic business increased, some firms immediately dropped foreign customers and their interest in

TABLE 1

Industry Classification of Firms Interviewed

<i>Type of Product</i>	<i>Number of Firms in Indiana</i>
Machinery except electrical	21
Electrical equipment and supplies	9
Fabricated metal products	27
Transportation equipment	10
Scientific instruments and related products	11
Chemical products	5
Rubber products	4
Farm machinery	6
Miscellaneous products	7

TABLE 2

Areas in which Indiana Firms Engage in International Trade

<i>Areas Traded With</i>	<i>**Number of Firms in Indiana</i>
Europe	52
*Latin America	36
*Middle East	13
Japan	13
Australia	11
*Southeast Asia and India	9
South Africa	4
*Eastern Bloc	3
*Iran	2
Taiwan	2

*These are the regions indicated by manufacturers as being recent ventures in the last five years, with the exception of Latin America. Only half of the manufacturers export to Latin America have begun in the last five years. **The number of firms will add to more than 100 because one firm may be involved in more than one area.

exporting. Other manufacturers made international trade a permanent part of their operations. Only a small percentage of companies have reached the level of commitment to which they offer their foreign customers the full product line and back their product with the quality of service made available to domestic customers. These firms have built a strong

TABLE 3

Inducements for Trade

<i>Inducements for Trade</i>	<i>Percentage of Companies Reporting</i>
Approached by an American Export Company to handle products abroad	23
Customer inquiries from abroad	27
Increased foreign demand caused by fuel crisis	5
Began shipping to American affiliates abroad	12
Company imports machine to complement its product line	10
Approached by foreign distributor or trading company	8
Cheap and plentiful raw materials abroad	6
Began participating in foreign trade show by invitation	9

TABLE 4

Distribution and Production Methods of Internalizing Export Activities

<i>Approach</i>	<i>*Number of Indiana Firms Establishing Foreign Operations</i>	<i>Number of Foreign Operations</i>
Subsidiaries	18	50
Joint ventures	6	8
Licensees	8	15

*Twenty percent of the manufacturers interviewed had at least one subsidiary, joint venture or licensee abroad. The total will be more than 20, however, since some firms have more than one affiliate or licensee abroad.

mer base abroad by modifying their
products for specific foreign markets. Table 5
the different ways Hoosier manufacturers
ified their products to sell abroad.
potential exporters complain of many prob-
lem in trying to enter the international market.
e problems they faced covered a broad
pectrum, but the ten most frequently men-
tioned were:
unfamiliarity with documentation and
paperwork required in exporting
inability of the manufacturer to get favor-
able credit terms for his customers

delays in transferring funds from abroad
high fees charged by export management
companies
high transportation costs
stricter safety requirements abroad
exorbitant duties and tariffs in the develop-
ing countries
unawareness of foreign markets
currency fluctuations
difficulties in servicing customers (for in-
stance, securing spare parts).
In spite of the red tape, many Indiana
companies have found that their export busi-

TABLE 5

Product Modification

<i>Type of Product Modification</i>	<i>*Number of Indiana Firms Reporting</i>
Special products for specific markets	15
Changes in labeling	12
Change in electric voltage	24
Conversion to metric system	10
(planning to convert)	24
Different safety standards	8
Noise abatement	4

*Less than 50% of the firms interviewed modified their product. These firms may have modified their product in more than one way, so the total will add up to more than 45.

TABLE 6

Present Export Revenues Relative to Total Revenue Received by Indiana Firms

<i>Current Ratio of Export to Total Revenue (%)</i>	<i>Number of Indiana Firms</i>	<i>Firms Expecting Ratio Increase</i>
0	8	8
1-5	22	18
6-10	23	21
11-15	21	15
16-20	6	3
21-25	5	4
26-30	2	1
31-35	4	2
36-40	3	3
Over 40	6	5

ness is still very profitable. Ninety-two percent of the Hoosier firms interviewed report their international business is as profitable, if not more so, than their domestic business. Current estimates of the ratio of export revenue to total revenue received by Indiana firms are found in Table 6. Eighty percent of the manufacturers polled expect the ratio of export revenue to total revenue to increase in the next five years.

Many firms have recognized the potential of foreign markets, and have profited by participating in them. The fact that exports of Hoosier manufacturers cover a wide range of products indicates that international trade has attracted the attention of the broader Indiana business community. In the future it appears that Indiana will strengthen its position in international trade.

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by
Bernard Faulkner
Richard Spiers

UNITED STATES—INDIANA BUSINESS INDICATORS*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

		UNITED STATES				INDIANA		
		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT								
Agricultural employment	July	116.0	115.8	119.2	July	107.7	107.2	113.9
Manufacturing employment	July	92.7	92.9	103.7	July	88.8	88.6	104.1
Average weekly hours (no.)	July	39.3	39.4	40.0	July	39.8	39.7	40.7
Average weekly earnings (\$)	July	187.85	187.54	176.80	July	217.71	216.37	207.16
Nonmanufacturing employment	July	125.8	125.5	125.8	July	120.3	119.7	120.4
Unemployment rate (%)	July	8.4	8.6	5.3	July	8.5	9.2	6.1
Unemployment rate—married males (%)	July	5.4	5.7	2.7	—	—	—	—
Continued unemployment claims	—	—	—	—	July	476.3	562.5	196.0
PRODUCTION								
Bituminous coal production	June	123.6	122.0	121.4	July	106.5	108.7	114.5
Industrial electricity production	May	130.5	130.7	141.7	—	—	—	—
Industrial electricity sales	—	—	—	—	June	125.2	122.2	139.6
Manufacturing production	July	108.9	108.5	125.2	June	116.9	116.1	133.9
Raw steel	June	82.4	85.5	114.6	June	95.0	93.2	126.4
CONSTRUCTION								
Construction activity—total	June	156.5	155.2	176.7	June	135.2	163.2	176.3
Residential housing starts	July	96.4	84.7	102.3	June	112.9	129.5	151.3
Residential expenditures	June	152.8	147.3	190.1	June	133.4	214.2	262.2
Nonresidential expenditures	June	158.2	159.0	170.2	June	140.8	142.8	143.6
Public expenditures	June	144.2	145.0	150.0	—	—	—	—
Public works and utilities	—	—	—	—	June	131.8	124.0	126.7
OTHER INDICATORS								
Checks to demand deposits	June	316.5	317.2	303.3	—	—	—	—
Bank debits	—	—	—	—	June	322.1	340.4	273.3
Personal income per capita (\$)	June	5,831.7	5,694.0	5,400.0	1975I	5,313.50	5,423.49	5,127.85
Passenger car sales (thousands)	June	770.0	741.0	812.0	June	18.3	16.8	21.7
Year to date (thousands)	June	4,102.0	3,332.0	4,654.0	June	99.8	81.5	120.5

SOURCE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Subscriptions to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

UNITED STATES BUSINESS INDICATORS
Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rate</i>		
	<i>1975 2d Qtr.</i>	<i>1975 1st Qtr.</i>	<i>1974 2d Qtr.</i>	<i>1975 2d. Qtr.</i>	<i>1975 1st Qtr.</i>	<i>1974 2d Qtr.</i>
Gross national product (GNP)	1,433.4	1,416.6	1,383.8	4.8	-3.9	7.6
GNP (\$ 1958)	779.4	780.0	827.1	-.3	-11.4	-1.6
GNP potential level (\$ 1958)	916.5	907.6	881.2	4.0	4.0	4.0
Government purchases	338.8	331.6	304.4	9.0	10.0	11.4
Personal consumption expenditures	938.1	913.2	869.1	11.4	8.0	14.3
Private domestic investment	147.3	163.1	211.8	-33.5	-63.2	2.5
Corporate profits before tax	108.9	101.2	139.0	34.1	-64.9	11.1
Business inventories	265.5	270.5	239.4	-7.3	4.0	17.3
Federal surplus-deficit (NIA)	-104.6	-54.4	-3.0	-	-	-

Monthly Data

	Current Levels or Annual Rates				Percentage Change at Annual Rate			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index†	July	162.3	160.5	148.0	July	14.7	9.7	10.3
Consumer price index—food†	July	177.4	174.4	159.4	July	22.7	19.8	−6.3
Wholesale price index†	July	174.8	172.6	160.8	July	15.9	−1.7	59.3
Money supply (\$ billions)	July	294.5	294.0	280.4	July	2.1	19.3	1.7
Money supply plus time deposits	July	651.8	647.3	599.6	July	8.7	20.5	5.3
Mobile home shipments (thousands)	June	210.0	224.0	383.0	June	−53.9	461.5	−30.9
Mortgages—outstanding (\$ billions)‡	June	261.4	257.9	243.4	June	17.2	16.1	11.2
Mortgages—new issues (\$ billions)‡	June	71.5	64.4	50.9	—	—	—	—
Mortgage rate—new homes	July	8.9	9.0	9.0	—	—	—	—
Prime rate business loans	July	7.1	7.1	12.0	—	—	—	—

†Base period, 1967 = 100.

‡All savings and loan associations.

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>July 1975</i>	<i>June 1975</i>	<i>July 1974</i>	INDIANA	<i>July 1975</i>	<i>June 1975</i>	<i>July 1974</i>
Manufacturing	89.4	89.9	120.0	Manufacturing	85.9	88.2	88.2
Food	91.9	91.5	94.3	Food	90.2	83.0	100.0
Apparel and textiles	90.5	87.4	96.0	Apparel and textiles	84.2	81.1	100.0
Lumber and wood	94.3	91.2	107.4	Lumber and wood	82.5	84.5	111.1
Furniture	90.7	91.1	114.2	Furniture	94.5	89.6	99.9
Paper	91.8	90.6	103.6	Paper	83.1	82.5	99.9
Printing	97.0	97.7	104.0	Printing	89.3	88.9	111.1
Chemicals	98.9	98.6	106.8	Chemicals	103.6	103.0	88.2
Petroleum and coal	101.6	101.2	105.6	Petroleum and coal	76.8	71.3	120.0
Rubber	110.3	107.9	131.1	Rubber	90.7	86.9	99.9
Stone, clay, and glass	92.9	93.2	110.0	Stone, clay, and glass	90.3	86.8	100.0
Primary metals	82.1	83.1	103.3	Primary metals	85.6	84.0	111.1
Fabricated metals	90.6	90.4	109.0	Fabricated metals	98.0	100.6	111.1
Nonelectrical machinery	96.2	96.7	111.2	Nonelectrical machinery	95.0	96.3	100.0
Electrical machinery	85.7	85.3	104.3	Electrical machinery	80.4	78.2	100.0
Transport equipment	2.5	2.2	91.2	Transport equipment	81.0	83.3	99.9

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	June 1975	May 1975	June 1974
ADAMSON			
AD*	160.6	156.1	139.3
AD†	876.2	803.8	275.9
AD‡	141.6	133.1	135.7
ADFORD			
AD	286.7	355.1	147.8
AD	115.6	121.8	116.9
ADOMINGTON			
AD	294.3	295.4	429.7
AD	544.8	644.4	258.5
AD	96.2	90.4	100.2
ADUMBUS			
AD	229.5	175.2	154.3
AD	430.3	467.3	69.2
AD	145.9	144.3	156.0
ADNERSVILLE			
AD	235.6	195.6	186.6
AD	858.8	759.5	198.0
AD	116.5	116.6	152.6
ADWFORDSVILLE			
AD	260.7	242.0	218.2
AD	1,201.3	1,322.6	313.6
AD	147.1	145.5	151.6
ADAT CHICAGO			
AD	212.3	161.2	181.3
AD	412.1	382.3	138.4
AD	91.0	102.1	107.2
ADLHART			
AD	245.7	229.9	218.2
AD	864.5	940.2	404.3
AD	146.2	139.9	156.3

INDIANA IN PERSPECTIVE

Response to Recession—Percent Changes in Personal Income Components, 4th Qtr. 1973 to 1st Qtr. 1975

	Total Personal Income	Non- Farm Income	Wages and Salaries	
			Manufac- turing	Construc- tion
United States	+ 8.5	+11.0	- 0.2	- 5.2
Indiana	+ 1.9	+ 6.1	-10.2	- 0.8
Illinois	+ 8.0	+10.7	+ 4.0	+ 5.1
Kentucky	+13.8	+13.3	+ 3.8	+ 4.6
Michigan	+ 4.0	+ 4.6	-17.2	-14.9
Ohio	+ 8.7	+ 8.7	- 5.6	- 1.4

Indiana ranked 43rd in growth of personal income and 48th in growth of nonfarm income. Put another way, only Michigan and Kentucky suffered more seriously in terms of nonfarm income and manufacturing wages and salaries. In total personal income, only West Virginia were harder hit by the recession.

SOURCE: U.S. Department of Commerce News, August 5, 1975.

REPORTING CITIES	June 1975	May 1975	June 1974
EVANSVILLE			
BD	198.3	188.0	196.4
CUC	417.8	526.5	134.6
IES	115.8	115.5	110.6
FORT WAYNE			
BD	268.4	255.6	255.6
CUC	1,476.8	1,235.3	174.5
IES	97.8	98.4	125.4
FRANKFORT			
CUC	1,079.7	1,176.3	237.8
IES	159.2	141.7	167.4
GARY			
BD	282.5	259.4	226.6
CUC	475.4	449.4	195.1
IES	98.6	91.7	169.7
GOSHEN			
BD	208.3	219.7	200.2
IES	152.0	142.0	171.8
HAMMOND §			
IES	151.9	153.2	144.3
HUNTINGTON			
CUC	1,807.1	1,745.5	160.3
IES	120.6	122.7	134.9
INDIANAPOLIS			
BD	451.8	493.6	236.8
CUC	559.9	560.1	232.4
IES	142.9	139.9	146.8
JEFFERSONVILLE			
BD	288.2	248.0	387.2
IES	121.8	121.7	147.8
KOKOMO			
CUC	670.1	900.4	476.1
IES	123.1	143.6	184.8
LAFAYETTE			
BD	208.8	196.8	195.1
CUC	1,164.8	1,098.4	328.7
IES	138.5	142.0	166.9
LA PORTE			
CUC	739.4	752.2	204.1
IES	190.3	178.0	167.7
LOGANSPOET			
BD	336.7	328.4	246.2
CUC	504.1	514.1	181.0
IES	174.2	193.7	186.1
MADISON			
BD	226.5	185.0	201.2
CUC	393.2	447.5	188.4
IES	150.0	114.8	123.6
MARION			
BD	148.2	165.4	156.9
CUC	566.6	606.2	373.5
IES	115.6	107.6	121.1

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§ Continued Unemployment Claims of

East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	June 1975	May 1975	June 1974	REPORTING CITIES	June 1975	May 1975	June 1974
MICHIGAN CITY				SEYMOUR			
BD*	260.2	252.3	207.1	BD	365.8	327.6	308.1
CUC†	775.9	668.7	194.0	CUC	354.5	332.1	72.1
IES‡	164.8	167.7	169.8	IES	92.2	83.4	121.1
MISHAWAKA				SOUTH BEND			
BD	120.4	121.9	221.1	BD	199.4	203.5	196.1
IES	141.4	129.9	104.1	CUC	622.6	524.8	179.1
MUNCIE				IES	100.0	96.7	104.1
BD	260.8	206.2	182.2	TERRE HAUTE			
CUC	382.6	395.5	118.7	BD	246.0	246.5	239.1
IES	105.4	95.2	116.0	CUC	359.1	411.6	158.1
NEW ALBANY				IES	145.8	144.0	174.1
BD	394.1	499.5	370.4	VALPARAISO			
CUC	872.3	817.1	290.4	CUC	507.5	546.4	294.1
IES	94.5	95.5	104.3	IES	111.2	157.9	163.1
NEW CASTLE				VINCENNES			
BD	249.1	220.9	226.8	BD	252.7	232.1	207.1
CUC	536.1	611.7	186.0	CUC	370.9	428.2	136.1
IES	121.0	119.6	150.8	IES	90.4	90.0	147.1
PERU				WABASH			
BD	286.9	263.3	223.8	BD	222.5	192.7	191.1
CUC	380.0	405.2	97.6	CUC	595.6	442.4	95.1
IES	161.9	165.3	159.7	IES	129.8	118.4	140.1
RICHMOND							
BD	195.9	181.1	154.0				
CUC	578.5	737.8	188.2				
IES	200.3	195.2	169.2				

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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Division of Research
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September 1975

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Bernard Faulkner, Gladys Huang, Judy Norman and Richard Spiers

UNITED STATES-INDIANA BUSINESS INDICATORS*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA			
EMPLOYMENT		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Agricultural employment	August	117.0	116.2	119.5	August	109.9	108.8	114.0
Manufacturing employment	August	93.9	92.8	103.4	August	91.0	88.5	103.6
Average weekly hours (no.)	August	39.7	39.3	40.1	August	39.9	40.0	40.5
Average weekly earnings (\$)	August	191.35	188.25	178.04	August	220.25	218.80	206.55
Nonmanufacturing employment	August	126.5	126.1	123.5	August	122.7	122.4	121.0
Unemployment rate (%)	August	8.4	8.4	5.4	August	8.4	8.5	5.5
Unemployment rate—married males (%)	August	5.0	5.4	2.7	—	—	—	—
Continued unemployment claims	—	—	—	—	August	349.6	476.3	158.0
PRODUCTION								
Bituminous coal production	July	123.6	123.6	118.4	August	113.5	106.5	85.3
Industrial electricity production	June	130.9	130.5	141.7	—	—	—	—
Industrial electricity sales	—	—	—	—	July	125.9	125.2	142.8
Manufacturing production	August	111.0	109.3	125.2	July	118.3	116.9	133.9
Raw steel	July	82.7	82.4	120.1	July	95.4	95.0	136.2
CONSTRUCTION								
Construction activity—total	July	157.9	157.3	178.0	July	171.5	168.3	181.3
Residential housing starts	August	98.1	96.4	90.0	July	107.7	112.9	168.4
Residential expenditures	July	158.8	152.1	192.5	July	235.3	231.0	269.0
Nonresidential expenditures	July	157.5	159.8	170.9	July	144.5	140.8	143.2
Public expenditures	July	147.3	150.8	155.7	—	—	—	—
Public works and utilities	—	—	—	—	July	133.4	131.8	127.3
OTHER INDICATORS								
Checks to demand deposits	July	322.2	316.7	313.1	—	—	—	—
Bank debits	—	—	—	—	July	320.6	318.2	327.8
Personal income per capita (\$)	July	5,796.9	5,831.7	5,472.2	1975I	5,313.50	5,423.49	5,127.85
Passenger car sales (thousands)	July	794.0	770.0	812.0	July	20.6	18.3	25.2
Year to date (thousands)	July	4,896.0	4,102.0	5,466.0	July	120.4	99.8	145.7

*C Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research and Instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Copies to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

UNITED STATES BUSINESS INDICATORS
Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rate</i>		
	<i>1975 2d Qtr.</i>	<i>1975 1st Qtr.</i>	<i>1974 2d Qtr.</i>	<i>1975 2d Qtr.</i>	<i>1975 1st Qtr.</i>	<i>1974 2d Qtr.</i>
Gross national product (GNP)	1440.9	1416.6	1383.8	7.0	-3.9	7.6
GNP (\$ 1958)	783.6	780.0	827.1	1.9	-11.4	-1.6
GNP potential level (\$ 1958)	916.5	907.6	881.2	4.0	4.0	4.0
Government purchases	338.1	331.6	304.4	8.1	10.0	11.4
Personal consumption expenditures	938.6	913.2	869.1	11.6	8.0	14.3
Private domestic investment	148.1	163.1	211.8	-32.0	-63.2	2.5
Corporate profits before tax	113.3	101.2	139.0	57.1	-64.9	11.1
Business inventories	265.5	270.5	239.4	-7.3	4.0	17.3
Federal surplus—deficit (NIA)	-104.6	-54.4	-3.0	—	—	—

Monthly Data

	Current Levels or Annual Rates				Percentage Change at Annual Rate			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Ago
Consumer price index†	August	162.6	162.3	149.7	August	2.0	14.7	14.7
Consumer price index—food†	August	177.4	177.4	162.2	August	0.0	22.7	23.7
Wholesale price index†	August	176.1	174.8	166.9	August	9.7	15.9	55.9
Money supply (\$ billions)	August	294.4	293.5	280.5	August	3.7	2.1	—
Money supply plus time deposits	August	653.8	650.5	601.9	August	6.3	8.5	4.3
Mobile home shipments (thousands)	July	225.0	210.0	343.0	July	128.9	−53.9	−73.9
Mortgages—outstanding (\$ billions)‡	July	264.4	261.3	245.1	July	15.3	17.2	8.9
Mortgages—new issues (\$ billions)‡	July	65.9	71.7	45.7	—	—	—	—
Mortgage rate—new homes	August	8.9	8.9	9.1	—	—	—	—
Prime rate business loans	August	7.6	7.1	12.0	—	—	—	—

†Base period, 1967 = 100.

‡All savings and loan associations.

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>August 1975</i>	<i>July 1975</i>	<i>August 1974</i>	INDIANA	<i>August 1975</i>	<i>July 1975</i>	<i>August 1974</i>
Manufacturing	93.3	89.6	120.5	Manufacturing	84.5	86.0	84.5
Food	93.5	92.4	95.5	Food	91.7	89.3	100.0
Apparel and textiles	90.8	90.1	94.3	Apparel and textiles	85.0	83.1	90.0
Lumber and wood	95.4	93.3	105.7	Lumber and wood	83.1	81.2	100.0
Furniture	98.6	92.5	112.9	Furniture	95.4	92.5	90.0
Paper	94.6	91.6	103.0	Paper	85.3	83.3	90.0
Printing	98.6	97.2	105.0	Printing	95.2	89.8	100.0
Chemicals	100.8	98.9	107.3	Chemicals	103.5	103.2	80.0
Petroleum and coal	98.1	102.6	105.0	Petroleum and coal	78.3	78.1	120.0
Rubber	113.7	110.9	132.7	Rubber	95.5	90.5	90.0
Stone, clay, and glass	96.0	93.9	109.9	Stone, clay, and glass	95.8	91.4	100.0
Primary metals	87.1	82.6	103.9	Primary metals	86.5	87.6	110.0
Fabricated metals	92.1	89.8	108.9	Fabricated metals	102.4	96.9	110.0
Nonelectrical machinery	98.0	97.0	112.9	Nonelectrical machinery	97.9	94.7	100.0
Electrical machinery	87.4	85.4	101.3	Electrical machinery	83.7	80.4	100.0
Transport equipment	86.5	83.0	92.3	Transport equipment	83.1	80.9	90.0

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	July 1975	June 1975	July 1974	REPORTING CITIES	July 1975	June 1975	July 1974
ANDERSON				FRANKFORT			
D*	167.4	160.6	172.2	CUC	1039.8	1079.7	293.8
UC†	493.5	876.2	188.8	IES	152.3	159.2	164.7
ES‡	141.0	141.6	144.2	GARY			
BDFORD				BD	273.5	282.5	230.2
UC	286.3	286.7	142.0	CUC	422.5	475.4	179.4
ES	140.3	115.6	136.9	IES	93.7	98.6	165.9
BOOMINGTON				GOSHEN			
D	306.3	294.3	342.6	BD	237.1	208.3	204.7
UC	507.1	544.8	254.8	IES	161.8	152.0	160.4
ES	94.4	96.2	101.8	HAMMOND §			
COLUMBUS				IES	154.1	151.9	155.1
D	351.0	229.5	156.0	HUNTINGTON			
UC	349.8	430.3	76.7	CUC	992.5	1807.1	148.4
ES	139.5	145.9	151.5	IES	112.9	120.6	140.2
CONNERSVILLE				INDIANAPOLIS			
D	184.6	235.6	205.1	BD	423.2	451.8	249.3
UC	442.7	858.8	192.9	CUC	285.2	559.9	246.3
ES	96.7	116.5	164.7	IES	140.4	142.9	145.4
FAWFORDSVILLE				JEFFERSONVILLE			
D	265.3	260.7	250.3	BD	267.1	288.2	460.7
UC	951.8	1201.3	325.4	IES	139.0	121.8	158.1
ES	171.2	147.1	128.5	KOKOMO			
EAST CHICAGO				CUC	343.4	670.1	377.2
B	195.5	212.3	233.0	IES	139.2	123.1	185.3
CC§	428.6	412.1	147.6	LAFAYETTE			
IB	80.7	91.0	100.5	BD	192.3	208.8	189.0
EL HART				CUC	1042.1	1164.8	331.9
B	235.3	245.7	237.0	IES	125.5	138.5	162.6
CC	572.8	864.5	344.5	LA PORTE			
IB	149.8	146.2	156.7	CUC	600.9	739.4	188.8
EVANSVILLE				IES	185.1	190.3	169.3
B	196.7	198.3	199.5	LOGANSPOET			
CC	338.8	417.8	187.8	BD	313.8	336.7	315.7
IE	124.2	115.8	129.0	CUC	391.2	504.1	305.0
FOT WAYNE				IES	231.7	174.2	179.6
B	267.8	268.4	266.3	MADISON			
CC	1327.1	1476.8	182.4	BD	200.4	226.5	211.9
IE	91.6	97.8	131.5	CUC	399.2	393.2	185.0
				IES	101.9	150.0	129.7

INDIANA IN PERSPECTIVE

Growth of Manufacturing Employment, 1954-1974

	Number of Employees 1974	Percent Change 1964-1974	Percent Change 1954-1964	Percent Change 1954-1974
United States	20,017,000	+15.9	+ 5.9	+22.7
Indiana	736,000	+16.6	+ 6.9	+24.7
Illinois	1,333,000	+ 7.7	+ 0.8	+ 8.6
Kentucky	286,000	+49.0	+24.7	+85.7
Michigan	1,104,000	+ 7.6	- 3.3	+ 4.1
Ohio	1,405,000	+11.8	- 4.2	+ 7.1

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§ Continued Unemployment Claims of

East Chicago and Hammond are combined

REPORTING CITIES	July 1975	June 1975	July 1974
MUNCIE			
BD*	231.0	260.8	196.0
CUC†	270.5	382.6	110.5
IES‡	109.2	105.4	128.2
NEW ALBANY			
BD	368.8	394.1	427.2
CUC	775.6	872.3	291.6
IES	96.6	94.5	104.5
NEW CASTLE			
BD	255.0	249.1	242.7
CUC	430.4	536.1	183.5
IES	139.8	121.0	182.1
PERU			
BD	244.4	286.9	248.8
CUC	430.0	380.0	112.8
IES	171.5	161.9	157.8
RICHMOND			
BD	158.6	195.9	168.6
CUC	579.7	578.5	258.6
IES	194.2	200.3	178.5
SEYMOUR			
BD	317.7	365.8	308.5
CUC	308.4	354.5	82.0
IES	98.0	92.2	126.0

REPORTING CITIES	July 1975	June 1975	July 1974
SOUTH BEND			
BD	191.1	199.4	191.1
CUC	457.8	622.6	170.5
IES	102.1	100.0	100.0
TERRE HAUTE			
BD	244.8	246.0	244.8
CUC	402.8	359.1	181.1
IES	145.6	145.8	170.5
VALPARAISO			
CUC	390.8	507.5	270.5
IES	188.9	111.2	188.9
VINCENNES			
BD	220.5	252.7	212.1
CUC	288.6	370.9	131.1
IES	112.6	90.4	157.8
WABASH			
BD	223.8	222.5	231.1
CUC	582.5	595.6	89.1
IES	144.2	129.8	167.1

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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Indiana Business Review


Highlights of the Outlook—A Message from the Dean 1

The Outlook for 1976

Government Purchases of Goods and Services	4
Business Fixed Investment	6
Residential Construction	7
Inventories	8
Net Exports	9
Personal Consumption Expenditures	10
Interest Rates, Prices and Money	13

The Indiana Economy

Introduction	15
Indianapolis	18
Gary-Hammond-East Chicago	20
Fort Wayne	22
Evansville	23
South Bend-Elkhart	24
Terre Haute	26
Southeastern Area	29
Muncie	30



Indiana Business Review

VOLUME L

NOVEMBER-DECEMBER 1975

HIGHLIGHTS OF THE OUTLOOK—A MESSAGE FROM THE DEAN

As we Americans enter our Bicentennial year we can look forward to improved economic conditions. Although the experience of the most severe economic decline since the Great Depression of the 1930s is fresh in our minds, 1976 promises renewed economic growth and stability. That is the central message of our annual economic Outlook Edition.

There are two sections to this issue, a national economic outlook and an Indiana metropolitan roundup. The national outlook is the permanent record of the economic forecast made in December by members of the School of Business faculty at public meetings throughout the state, and reflects their interchange of ideas with members of the business community. The metropolitan roundup offers independent contributions by economic observers in major Indiana communities. Although the two sections differ in detail, they point to a year of continuing recovery for the nation and the state.

With major elections ahead of us, political as well as economic forecasting is needed. It is believed that the Federal Reserve will neither cause nor allow a significant rise in long-term interest rates and that the rate of inflation will rise, but remain below the disruptive double digit levels of earlier years. Consumers and business firms must become convinced that the recovery is solidly based before renewed business investment will lift the economy to still higher levels. A brightening in the automobile picture, but sluggish housing recovery portends a gradual sustained restoration of confidence and economic security.



Schuyler F. Otteson, Dean
School of Business
Indiana University

The Outlook for 1976

This section of the Outlook was prepared by Eugene Brady, chairman and professor of Business Economics and Public Policy; Howard G. Schaller, associate dean and professor of Business Economics and Public Policy; Robert C. Turner, distinguished professor of Business Economics and Public Policy; and Jack Wentworth, professor of Business Administration and chairman of the MBA program.

The recent recession reached bottom in the first quarter of 1975. In the second quarter, real GNP (GNP measured in constant dollars) turned upward at a 1.8% annual rate, exactly as our forecast of a year ago predicted. The advance continued in the third quarter, when current dollar GNP jumped at an 18.6% annual rate and real GNP at a 13.2% annual rate. (This was a larger increase than we predicted a year ago.) Much of this increase was attributable to a decline from the \$31 billion inventory liquidation of the second quarter to only \$5.5 billion in the third quarter.

Final sales (GNP less inventory change) increased at an 11.1% annual rate in current dollars and 4.9% in constant dollars. The third quarter increase was also heavily influenced by the tax cut of last spring, most of which was not reflected in actual spending until the third quarter.

Although the recovery will continue in the current (fourth) quarter, no comparable increase is in prospect. Inventory liquidation has been nearly completed and the tax cut has already had its primary, initial impact. Future consumers and business decision makers are not yet fully convinced that the recovery has a firm footing.

The recovery will gain momentum during the first half of 1976. However, we do not anticipate a vigorous recovery. None of the nonconsumption components of demand show any promise of providing the necessary stimulus for anything resembling a boom. Government spending (federal, state and local) for goods and services will rise only slightly faster than the anticipated rate of inflation; that government spending in constant dollars will rise very modestly. Capital spending by business will lag, as it normally does, behind total economic activity.

INDIANA BUSINESS REVIEW	VOLUME L	NOVEMBER-DECEMBER 1975
Bonnie Shelton	Chief Editor	A publication of the Division of Research, School of Business, Indiana University, Bloomington, Indiana
Victoria Harian	Assistant Editor	H. D. David Administrative Director
Louise Guthrie	Staff Assistant	Morton J. Marcus Research Economist
Denise Young	Compositor	Bonnie Shelton Chief Editor

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Inventory investment by business will turn from liquidation to accumulation, but business firms will be very cautious about rebuilding their inventories and thus risk being caught in an excessive inventory position as they were in 1973 and all of 1974. The recovery in residential construction will be very modest; there are still many unsold housing units on the market, and prices have risen to the point where many prospective buyers are effectively squeezed out of the market, at least until their incomes and asset positions—or their *anticipated* future financial positions—improve substantially. Our net export position, which was quite favorable in 1975, will continue to be so in 1976, but will not contribute to recovery as much as it did this past year, chiefly because our principal customers abroad are lagging behind the United States in coming out of the recession.

Consumer spending is heavily dependent on income generation in the more volatile consumption components of GNP. We do not expect consumer spending to rise at a slightly faster rate than nonconsumption spending, as consumers gain confidence in the economic future. The savings rate, which has been above the historically normal range for the past year, should move back into that range in 1976.

Automobiles in particular show signs of significant recovery from the severely depressed sales of the 1975 model year. The 1976 models seem to be appealing to prospective car buyers better than did the 1975 models, the threat of gasoline shortages has disappeared, price increases have been relatively modest, and the scrappage rate of the past two years has stimulated a latent demand for new cars. We do not anticipate a boom year in automobiles, but there could be a definite improvement over 1975. The difficult but important uncertainty in forecasting 1976 is estimating how long the recovery will be sustained. This question involves both political and economic forecasting. The 1975 tax cut has been extended for only six months, following the Presi-

dent's successful veto. What will they do in the spring? Will the Federal Reserve adhere rigidly to its 5 to 7½% target for the annual increase in the money supply? Will there be a prolonged strike in a basic industry? Will corporate price policies and labor pressures cause the inflation rate to accelerate and thus dampen consumer demand? Obviously, forecasting that requires answers to these questions becomes highly speculative.

It is our guess that the President and Congress will agree on a tax cut-expenditure program for the full 1976 calendar year that affords at least as much stimulus, and perhaps more, than was in the original vetoed bill. It is also our guess that the Federal Reserve will yield a bit on its 5 to 7½% target, though not much. Consequently, we expect interest rates, especially short-term rates, to drift upward as the year progresses. It is also our prediction that the inflation rate, despite erratic month-to-month fluctuations, will tend to rise during the year, though falling short of the double-digit range of a year or so ago.

The nation's policy makers, in 1976, will be in the precarious position of possibly providing too much economic stimulus and thus triggering another bout of virulent inflation, or providing too little and thus choking off the recovery. Our estimate—and it can be nothing but preliminary at this time—is that the pace of the recovery will slow down in the second half of 1976, especially if no further tax relief is enacted before then. But the momentum of the recovery should be enough to carry through the balance of the year and into 1977, even though at a reduced rate.

NOTE: The Department of Commerce promises to publish, in the near future, their oft-postponed retroactive revision in the GNP accounts. This basic revision will include both statistical and definitional changes. As the 1976 numbers become available it will therefore be impossible to compare those numbers directly with the numbers in our forecast. However, no serious error should ensue from comparing the *percentage* changes with the similar percentages in our forecast. As a minimum, we hope that the new numbers will confirm our description of the direction of economic events.

GOVERNMENT
PURCHASES OF
GOODS & SERVICES



Federal Government

Two factors have an important influence on federal government expenditures. One is, of course, the fact that the President and the congressional majority are of opposite political parties and differ strongly on budget policy. As a consequence, the composition of the budget is likely to be quite different from that recommended by the President. The other factor is the influence of the new congressional budget committees, created by the Congressional Budget and Impoundment Control Act of 1974. These committees are charged with formulating overall congressional budgetary policy. They have no power to appropriate money or to enact taxes, but they set guidelines for the numerous and previously uncoordinated committees and subcommittees involved in the tax-setting and appropriations processes. Each budget committee, then, uses its persuasive powers to coordinate individual committee actions to achieve a total budget that is consistent with overall congressional policy.

When this procedure was enacted into law in 1974, many jaundiced observers were rather pessimistic about the committees having any real influence. As events have worked out, however, especially on the expenditure side of the budget, the committees, backed up by some excellent reports from the congressional budget office staff, have exerted a clearly positive influence in the direction of responsible budget making.

Another incidental effect of the 1974 legislation was to shift the starting date of the fiscal year from July 1 to October 1, beginning in 1976. The purpose of this was to give Congress more time to complete its action on the budget. The present Congress is therefore enacting a

budget for the current (1976) fiscal year amounts for the three-month transition period from July 1 to September 30, 1976.

Congressional pressures have been in the general direction of increasing the nondefense portion of the budget above the President's budget request. Most of the increases in the nondefense sector, however, have been in transfer payments, rather than in purchases of goods and services. We estimate that various transfer payments, including Social Security, unemployment compensation, public assistance, food stamps, and grants to state and local governments will run about \$20 billion more than the amounts estimated in the President's original (January) budget. A portion of this increase is automatic (for example, for unemployment compensation), and another portion was recognized by the President in his revision of the budget estimates (such as *extended* unemployment compensation). A substantial part of the increase reflects congressional decisions, such as a refusal to enact a 5% cap on Social Security benefits (currently tied to the Consumer Price Index) as recommended by the President, a rejection of the proposed food stamp price increase, a temporary reduction in state matching for highway projects and increases in veterans disability benefits. Yet, contrary to earlier prognostications, the 5% cap on federal government employee pay raises (which is a GPGS item, a transfer payment) has been enacted as recommended by the President.

Most of the nondefense GPGS items in the President's budget, other than for new public works, are for the ongoing, routine activities of government, and the controversies between the President and the Congress involve major amounts. It therefore seems probable that although transfer payments will significantly exceed the amounts originally requested by the President, purchases of goods and services for nondefense purposes will be only moderately larger than the amounts in the President's January program.

recasted Gross National Product by Sector

(Billions of dollars except where noted; quarterly data at seasonally adjusted annual rates.)

	1975 3d Qtr.†	1975 4th Qtr.	1976 1st Qtr.	1976 2d Qtr.	1976 3d Qtr.	1976 4th Qtr.
Government purchases of goods						
and services	343.5	351.5	359.0	366.8	375.0	383.5
Federal	130.5	134.0	136.5	138.8	141.0	144.0
Defense	86.1	88.0	89.0	90.0	91.0	93.0
Other	44.4	46.0	47.5	48.8	50.0	51.0
State and local	213.0	217.5	222.5	228.0	234.0	239.5
Nonresidential private domestic investment	179.1	186.2	195.3	207.2	218.1	228.5
Business fixed investment	143.6	146.0	151.0	157.2	164.2	172.5
Residential structures	41.0	42.8	43.3	44.0	44.9	46.0
Inventory investment	-5.5	-2.6	1.0	6.0	9.0	10.0
Exports	12.2	7.0	7.0	4.5	3.2	2.5
Personal consumption expenditures	968.8	989.6	1015.6	1047.3	1077.1	1111.8
PCE autos	55.2	57.2	58.1	60.4	59.7	63.2
PCE excluding autos	913.6	932.4	957.5	986.9	1017.4	1048.6
GDP	1503.6	1534.3	1576.9	1625.8	1673.4	1726.3
GDP deflator (1958 = 100)	186.0	188.7	191.5	194.7	198.2	202.2
Annual rate of increase*	4.7%	5.9%	6.1%	6.8%	7.4%	8.3%
GDP in 1958 \$	808.3	813.1	823.4	835.0	844.3	853.7
Annual rate of increase*	13.2%	2.5%	5.2%	5.8%	4.5%	4.5%
Personal income	1255.2	1278.1	1308.8	1346.2	1385.6	1429.4
Disposable personal income	1079.6	1099.2	1123.0	1152.3	1184.7	1222.1
Personal saving	84.6	82.4	81.2	77.9	80.1	83.5
Saving rate (NPS/DPI)	7.8%	7.5%	7.2%	6.7%	6.7%	6.8%

†Compounded quarterly

Qtr. data revised as of Nov. 15, 1975, not reflected here

The Department of Defense budget is another matter. Here Congress has been cutting back on the President's program. However, appropriations will be reflected in actual expenditures only after a considerable lag; except for compensation of military personnel and procurement of minor items, the Defense Department operates largely on multi-year ap-

propriations with long lead times. This means that the congressional appropriation cuts in the fiscal 1976 budget will be reflected chiefly in the 1977 fiscal year (which begins October 1, 1976) and in subsequent years. We estimate that actual expenditures in fiscal 1976 will be only about \$1-2 billion below those estimated in the January budget.

The deficit in the budget (on a unified budget basis) will probably exceed \$70 billion, and may exceed \$75 billion depending on economic developments. Most of this deficit represents a drastic shortfall in revenues, resulting from the recession and the 1975 tax cut, plus the sharp increase in unemployment compensation payments. If the economy were operating at full employment, the deficit would probably be in the \$12-15 billion range. So far, the money markets have been able to absorb Treasury financing required by a deficit of these proportions. Whether this will continue to be true in 1976 depends on the strength of private demand for funds and Federal Reserve action. We do not foresee any "crowding out" of private financing, at least until well into 1976, that could not be precluded by a moderately accommodative Federal Reserve policy.

State and Local Governments

For the past two years, state and local governments have been caught in a bind between rising prices (including wages of government employees) and tax receipts which, though rising due to inflation in spite of the recession, have lagged behind the rise in prices. Expenditures in constant dollars have therefore been almost flat, in contrast to their steady increases of recent decades. There are signs that, with a few important exceptions, a slow reversal of this process may be beginning. Tax receipts are responding to the rise in business activity. Sales tax revenues are up. The loss in corporate income tax receipts resulting from a shift from FIFO (first-in-first-out) to LIFO (last-in-first-out) inventory accounting has probably already come to an end; most corporations that stood to gain from such a shift have already done so. Further, corporate profits are rising and should rise further.

The insolvency of New York City has made many municipal authorities reassess their expenditure patterns, and the widespread publici-

ty regarding the New York situation voters in the November elections to disavow many proposed new state and municipal issues. These events will put some damper on debt-financed state and local government spending over the coming year.

The net effect of these two developments—rising tax revenues but reduced debt financing—will probably be a small rise in state and local government purchases of goods and services in real terms, that is, a rise in constant dollars only modestly larger than the expected rate of inflation. No strong boost in recovery from state and local government spending seems to be in prospect, at least for certain municipal governments get their fiscal houses in order.

BUSINESS FIXED INVESTMENT



Throughout the downturn, which began in 1973 and ended this past spring, real capital expenditures followed the pattern expected during a recession. In the early phase of the decline, these expenditures continued to increase as businessmen completed projects that had been planned previously. Encouraged by past high rates of plant utilization and supported by boom profits, capital spending remained high. However, late in the boom and then early in the recession, high interest rates resulting from an anti-inflationary tight money policy began to affect capital spending decisions. As the recession deepened, excess capacity appeared and profits began to decline. As a result, capital spending slowed, but private capital goods continued to increase. The net effect was a decline in real (constant dollar) spending on capital goods.

The decline is not yet over, even though the economy has turned up. While business investment increased by about \$1 billion in the third quarter of 1975, the increase was

great as the increase in capital goods prices, and thus, real spending fell. Moreover, there are undoubtedly more price increases to come, meaning that the projected increase in current dollar expenditures for the fourth quarter of 1975 will have translated into little, if any, increase in real expenditures. However, by the second quarter of 1976, real capital spending could be increasing, thus contributing to the recovery. Capital spending will behave as is generally expected during a recovery period.

Two factors strongly suggest that real expenditures will be increasing substantially by the second or third quarter of 1976. First, inventory liquidation during the past nine months has improved the cash position of many business firms. Further, the picture on profits continues to brighten and cash flows should improve. Second, the fairly brisk rate of recovery expected for the next few quarters should result in cash utilization rates higher and increase willingness to add to capacity. The latter influence is especially relevant to firms in energy-related industries (petroleum, gas, coal, electrical utilities) and in food and beverages industries which are already operating close to their preferred levels. Textile and other soft goods manufacturers are also expected to step up their rates of capital spending substantially. Autos and transportation, notably air transportation, however, are still in the doldrums, and will require a substantial pickup in business activity before capital spending in these industries will begin to trend upward.

Although the expected pattern of total capital spending is now a bit improved, there is still a shadow on the horizon. Long-term interest rates remain high even in the early stages of recovery, as inflation continues to be high by historical standards. Profits may pick up and contribute to cash flows, and the liquidity positions of many corporations have been improved by the conversion of short- to long-term debt; however, many firms are operating with relatively high debt ratios in their capital structures, and would be reluctant to

borrow at high rates if required to do so for expansionary purposes. This reluctance would certainly be heightened if tight money were to bring back double-digit interest rates late next year. Also, should the rate of increase in consumer spending falter, declining consumption demand would dampen capital spending.

The failure to achieve high rates of capital spending within the next year would be especially harmful in view of the need to add to the capital stock to equip our growing labor force, and to increase output to dampen inflationary pressures. Future capital requirements will be general in nature, but could become critical in the materials industries which experienced shortages in 1973. These industries appear ready to expand if the recovery is sustained and money is available on moderate terms.

Our forecast shows an increase of 11% for business fixed investment in 1976 over 1975 in current dollars. Because capital goods prices are expected to increase by 8-10%, this will mean only a modest increase in real expenditures. The need for further real increases in 1977 is obvious.

RESIDENTIAL CONSTRUCTION



The residential housing sector has not yet made any substantial recovery from its worst slump since World War II. Housing markets remain in a depressed state, and this sector (which traditionally leads the U. S. out of recession) is not likely to improve very much during 1976.

We began 1975 with an inventory overhang of more than one-half million dwelling units, and at the end of the year, the number of unsold units was still high. As of the third quarter of 1975, there were about 375,000 unsold single-family homes in the U. S., down only slightly from the 407,000 unsold units at the end of 1974. The coming year should see a continued decrease in the unsold inventory of

both single-family and multi-family dwelling units, coupled with a gradual improvement in new construction, with most of the increase taking place in the single-family dwelling unit market. The number of housing starts should gradually increase from about 1.4 million (on a seasonally adjusted annual basis) for fourth quarter 1975 to about 1.6 million starts for the last quarter of 1976.

Recent periods of housing decline (1966-67 and 1969-70) coincided with periods of credit crunch, where short-term rates of interest were well above long-term rates, and mortgage market credit became scarce. However, the current housing slump appears to be different in nature. Thrift institutions have ample supplies of mortgage funds available, but are reluctant to trim their lending rates because of expectations of higher future inflation rates, and because over half of their savings liabilities are locked into fairly long-term certificates of deposit at high interest rates.

The current softness in the housing market is also a result of consumer caution and builders' unwillingness to engage in speculative construction in the face of large unsold inventories. Prospective single-family house purchasers are reluctant to pay more than 9% interest on mortgages for houses having an average price of \$40,000. With real income per capita just now returning to 1973 levels, consumers will continue to postpone new home purchases until their real asset and real income positions improve further. For this reason, we do not expect a very strong housing market in 1976.

The market for multi-family dwelling units will remain soft over the coming year. Recent overbuilding of condominiums, although limited to specific geographic regions, combined with proposed changes in the federal tax laws to restrict tax losses on multi-family housing investments will limit activity in this sector over the coming year. Commercial banks and other financial institutions are still recovering from the substantial losses they have taken

in recent years on their affiliated REITs. They are unwilling and unable to extend them on other than the most secure of housing projects.

In summary, the availability of housing finance is not a critical variable as it has been in past housing slumps. Rather, the price of housing and the mortgage terms on which financing is offered are deterrents to effective housing demand. Lagging demand, combined with the excess supply of housing presently in the market, makes the outlook for housing somewhat soft for the coming year.

INVENTORIES

The sharp increase in third quarter 1975 was mostly due to the decline in inventory runoff. Inventories fell by \$5.5 billion in the seasonally adjusted annual rate, down sharply from the \$31 billion liquidation of the second quarter. Manufacturing inventories typically account for most of the downward adjustment in the later stages of an inventory runoff, and 1975 was no exception. Manufacturers continued to cut inventories, while retailers and wholesalers were beginning to increase moderately their inventories in anticipation of higher future sales. We expect a mild inventory accumulation to begin in 1976, as manufacturing inventories will again begin to accumulate.

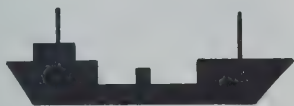
The inventory buildup that we anticipate for 1976 will be a voluntary accumulation opposed to the unwanted inventory buildup that took place in 1974 when manufacturers (mainly automobile producers) were left increasing inventories of unsold products. The buildup should increase in momentum through 1976, with inventories accumulating at about \$10 billion annual rate by the fourth quarter of the year. We should not expect the rate of inventory buildup to reach past historical levels.

ever, since business firms have learned to operate with smaller inventories than in the

The high cost of holding inventories (insurance, storage, heating, deterioration), combined with the more widespread use of computers and better management techniques, together have led to more efficient inventory positions—in part, less inventory per level of sales. Christmas ordering by retailers in 1975 was down sharply from 1974 levels, primarily because firms wished to avoid the large inventories they accumulated after the 1974 Christmas season.

The 1974 experience of inventory shortages turning into surpluses may be reversed in 1976. Overcautious inventory buying may lead to product shortages in 1976 that will result in disappointed consumers and frustrated retailers. In any case, we expect moderate inventory accumulation during 1976.

NET EXPORTS



During 1975, the United States recorded its largest merchandise trade surplus ever, a sharp turnaround from the \$260 million deficit recorded in 1974. This rebound in net exports reflects marked changes in the level of U. S. economic activity as contrasted with patterns of activity in the rest of the world. The bulk of the turnaround in 1975 was due to the sharp decline in U. S. imports caused by the recession.

The nation's largest import demand decline was for petroleum products: the demand for imported oil fell by 50% during the first half of 1975. Imports of manufactured goods and chemical products also fell sharply during the year.

Primarily because of inventory liquidation during 1975, firms cut surplus stocks of both finished products and raw materials, and their

import demands for these commodities declined sharply.

We expect a trade surplus (an excess of the dollar value of exports over that of imports) to continue throughout 1976, with a moderate decline in our surplus position as 1976 draws to a close. This expected decline is partially due to the fact that the United States is currently coming out of the recession, while many of our major trading partners will experience somewhat later economic recoveries. It is expected that we will lead the industrial world out of its current slump, deteriorating our net export position in the process. In addition, the U. S. inflation rate is expected to be lower than rates of inflation abroad. This will lower relative world prices for our exports and will drive up the relative prices of the commodities we import, thus stimulating export demand and decreasing our demand for imported products.

The OPEC countries announced a 10% increase in the prices of their petroleum exports last October, and if these increases are maintained, they would easily add \$2 billion to our import costs. However, recent evidence indicates that some of the petroleum exporting countries are themselves running balance-of-payment deficits and may be forced to cheat on their cartel arrangements by openly or covertly cutting the prices of their petroleum exports to bring in foreign exchange. Of course, the extent of the economic recovery in the United States and other industrial countries will dictate the demand for petroleum imports from OPEC member countries, but if world demand remains soft, the OPEC cartel is in some danger of disintegrating.

Even if a strong economic recovery increases our demand for imports more sharply than is currently expected, our trade balance should remain positive throughout 1976. A record 1975 feed grain harvest, coupled with a poor crop year in the Soviet Union, should increase our export earnings through most of 1976 as a result of existing and prospective grain sales contracts with Russia. In addition, sustained strong Japanese demand for soybeans

will continue to improve our trade position. The agricultural sector has been entirely responsible for our trade surplus. Agricultural exports, coupled with increasing world demand for our manufactured goods, machinery and transport equipment, should keep the U. S. merchandise trade account positive throughout 1976.

The recent turnaround in economic activity has strengthened the dollar in international money markets, since economic activity in England, France, Germany and Italy has not yet begun to pick up. The dollar had been in general decline from the exchange rates set at the Smithsonian Agreement in late 1971. However, a positive U. S. trade balance will strengthen the dollar on world markets.

PERSONAL CONSUMPTION EXPENDITURES



Consumers hold the key to continuance of the incipient recovery. No other sector of GNP promises at this time to provide a strong expansionary influence, except for inventories and this will be temporary. A strong rise in consumer spending would generate rising consumer incomes and lead to further rises in consumer spending. Further, after a lag, a continuous rise in consumer spending would provide increasing support for the moderate increases in nonconsumer spending that we foresee.

There are several reasons for expecting a steady rise in consumer spending. First, the liquidity position of consumers has improved. In the past year, disposable personal income (measured in current dollars) increased about 9%, but total consumer credit outstanding is only about 1% above the year-ago figure. Consumers are in a position to take on more debt if they are in the mood to do so.

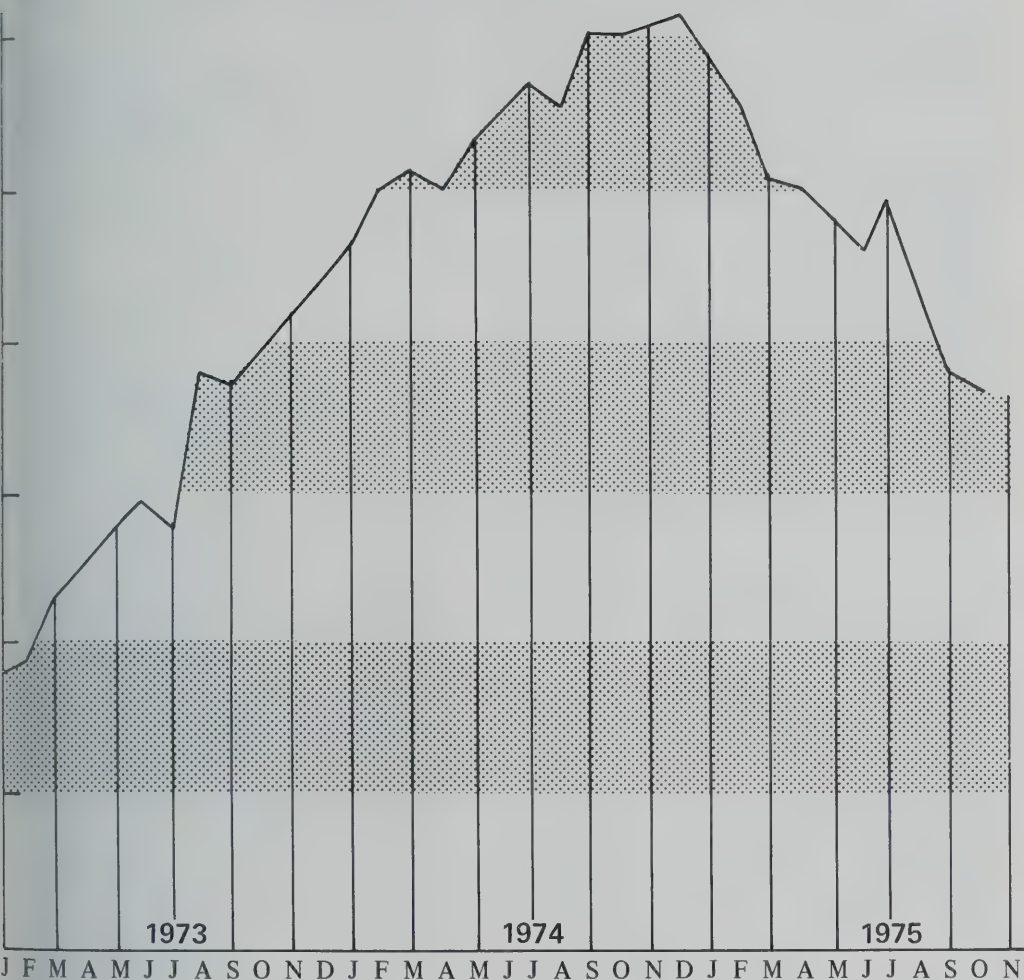
A related development is the improved wealth position of consumers in recent months. In 1973 and 1974, more than \$525 billion in intangible assets disappeared in the stock mar-

ket alone, and this loss was magnified by rate of price increase during that interval. Every dollar decline in assets, aggregate consumption spending tends to decline three to five cents, so that a decline of some \$10 billion of household spending and probably another \$15 billion in business spending is the result of eroding real wealth position. In part, the 1974-75 recession was underestimated because the 1973-74 stock market decline was unanticipated. Throughout 1975, however, with rising securities markets, households improved their real asset positions, and discretionary consumption spending was on the rise. To be sure, the recovery is far from complete. At the end of 1975, real per capita wealth was finally returning to levels existing in 1964. The improvement in the past twelve months is substantial.

A third reason for optimism is the reduction in the rate of inflation. Prices are still going up, but the rate of inflation, as illustrated in the accompanying chart, has moderated since the end of 1974. In 1974 and the early months of 1975, total personal incomes were rising faster than prices, so that real incomes declined. In the past several months, however, incomes have more than kept pace with the cost of living. How long this effect is expected to persist will be discussed later, but for the moment it is a favorable influence.

Another favorable factor is the continuation of the 1975 tax cut, even for only six months. If it had not been continued, withholding taxes would have increased on January 1, 1976, and consumer expenditures would have been dampened appreciably. If the unemployment rate stays as high as now seems probable, there is a virtual certainty that the President and Congress will agree on a continuation of the tax cut through the balance of the year. Furthermore, if money incomes rise for either real or inflationary reasons, the phenomenon of fiscal drag goes into reverse; that is, as money incomes rise, people move into higher tax brackets and the percentage of their income taken in taxes increases. A tax cut larger than 1975's cut would be needed to keep constant the percentage of in-

Annual Changes in the Consumer Price Index
(Percent increase over the same month one year earlier)



ected in taxes. Although the tax cut-
nditure issue will not be fully resolved
next spring, it is highly probable that, in
election year, the President and Congress
agree on a fiscal policy that precludes
ing off the recovery and a more expansion-
one may be enacted.

The most important reason for expecting a
tinued rise in consumer buying is the rise in
employment. In this respect, the un-
employment figure may be misleading. The rise
the seasonally adjusted unemployment rate
October from 8.3% to 8.6%, for example,
widely interpreted as a sign that the

recovery was faltering. Actually, total employ-
ment rose in October, again after adjustment
for normal seasonal variation. Then in Novem-
ber the unemployment rate dropped to 8.3%
again, but employment declined slightly. This
apparent inconsistency is due to the fact that
the unemployment rate is a percentage of the
civilian labor force, which itself fluctu-
ates—sometimes erratically. Whether or not a
person is employed is a matter of fact, and can
be easily ascertained. But whether or not a
person is “seeking work” often requires a
subjective determination.

There are several million marginal participants in the labor force, in-and-outers, chiefly housewives and persons eligible for Social Security, who look for work when jobs are readily and conveniently available, but under opposite circumstances may not make the effort. Further, the baby wave of the 1950s is continuing to add a high number of young people to the labor force.

The moral to the story is that what generates and sustains a recovery is not a *low unemployment rate*, but a *high absolute level of employment*. From June to November, employment rose by nearly a million workers, an indication that the recovery has acquired substantial momentum.

Several possible events, however, could slow down the rise in consumer confidence and spending. The most important would be a step-up in the inflation rate, especially if it is not accompanied by an equal rise in money incomes.

A second setback would be some new external or exogenous shock to the economy—a crop failure in 1976, further trouble in the Middle East or in Asia, or a protracted labor dispute in a basic industry. A number of major labor contracts come up for negotiation in 1976 (autos, trucking, rubber, electrical equipment, construction and others). Despite the probable continuance of an unemployment rate well above 7%, unions have served notice that they intend to demand large increases in wages and fringe benefits, notably improved supplemental unemployment insurance programs.

A third possibility would be a significant rise in interest rates, which would undermine consumer confidence, bring the precarious improvement in housing construction to a stop, and choke off capital expenditures by business. We do not expect either a resumption of virulent inflation or sharply rising interest rates to interfere with a continued rise in consumer spending at least until the middle of 1976. Beyond that may be a different story, but our forecast assumes a rise in consumer spending

that slightly exceeds the rise in disposable personal income. In other words, we are anticipating that the saving rate, which has been in the normal 5-7% range in recent quarters, will drift back into that range by the second quarter of 1976 and hold at 6.7-6.8% through the remainder of the year.

Automobiles

Many economists feel that the automobile is the most volatile component of personal consumption expenditures, led us directly or indirectly into the recent economic recession. There are now indications that the automobile may carry us back out. Presently, one thing that is quite clear is a definite lack of the negative signs that surrounded this industry just a few months ago. Therefore, we are projecting a recovery in the automobile industry, although we do not see a real boom for at least a year.

There are several reasons for this cautious optimism. We see indications of greater consumer confidence in the economy, and greater confidence in the automobile itself. The industry has done much to remove the conflicts concerning the future of the American car. It seems to be more in tune with prospective purchasers than it was a year or two ago. The investment in an automobile appears much safer than it did a year ago.

The scrappage rate for automobiles has been extremely low during the past two years. This translates into pent up demand, since it has been estimated that there are about 10 million cars on the road that would have been scrapped under normal circumstances.

Added to these factors is the product line that American automobile manufacturers have made available for 1976. There are many smaller cars in the product lines, including the subcompact Chevette. Ford has its MPG and Chrysler its Plymouth Volare and Dodge Aspen. Consumers have a greater choice to meet their current needs.

Gas mileage in the 1976 models is up. Although there has been no great technical breakthrough, fuel efficiency has improved enough to encourage consumers to buy, and new cars look particularly good compared to "gas guzzlers" of a few years ago.

All of these factors are conducive to the "new car fever" which we are beginning to see on a sporadic basis, and which has been missing during the past two years. Effective demand for new cars is also implemented by higher used car prices.

With these positive factors, a very optimistic forecast could be forthcoming. However, there are other elements which tend to hold back automobile demand, including consumer anticipation of the 1977 models. General Motors has already announced that it will have new standard sized car lines for 1977 that will involve significant changes in styling and will be nearly one and one-half feet shorter than comparable 1976 models.

There is also some indication of a change in consumer automobile buying habits. Consumers have found that it is not as important to driving a new car as they once thought. Also, they have found their cars really can last longer, as evidenced by the lower scrappage rate of the past two years. In addition, lower expenditures per car are due to the purchase of smaller cars, and the possibility of less optional equipment per car. For the first time, there seems to be a reversal of the trend toward automatic transmissions.

In summary, we forecast a definite brightening of personal consumption of automobiles, but we do not see a major thrust upward during 1976. We predict a strong fourth quarter; in fact, we may see the beginning of a recovery in October when the 1977 models come out. At this time, 1977 looks like it could be an extremely good year.

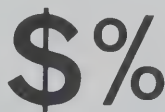
Consumer purchases of mobile homes which are classified in the national income accounts as an automobile "accessory" dropped more than 50% from the peak first

quarter of 1973 to the trough first quarter of 1975. Measured in constant dollars, the drop was about 60%. Since then sales have picked up, but they are still low by historical standards.

Demographic determinants suggest a substantial increase in mobile home sales in 1976. The rising costs of conventional housing make mobile homes attractive to young married couples and others who do not have the down payment for a standard house. Although costs and prices are also rising in the mobile home industry, the rise, 3% in the past year, has been much less than the rise in conventional housing. Unless tight money chokes off credit availability, we expect mobile homes sales to rise steadily in 1976.

Expenditures for automobile parts and accessories other than mobile homes have been fairly stable in the past year or so, as might be expected in view of the increasing average age of vehicles on the road. We anticipate a gradual rise in these expenditures during 1976 (partly for inflation reasons) at least equal to the rise in consumer incomes.

INTEREST RATES, PRICES AND MONEY



We anticipate that the inflation rate will tend to creep upward again as the recovery advances further, as businesses increase their rate of capacity utilization, and as unions try to regain purchasing power lost in 1974 and early 1975. For the next six to nine months, however, the upward creep will probably be irregular and of modest proportions, and money incomes should rise faster. There are two chief reasons for this conclusion. First, in the early stages of a recovery, productivity gains are normally large, as they have been in recent months, which means an actual reduction in unit labor costs. Second, manufacturing businesses in general are still operating at only about 70-75%

capacity, in contrast to a 90-95% preferred operating rate, which means that competitive pressures are still strong.

The short-term outlook for interest rates is good. The Federal Reserve is apparently following a policy of stabilizing short-term rates, and will probably continue as long as the expansion in the money supply is moderate and the inflation rate stays within reasonable bounds. Corporations have improved their liquidity positions during the past year, so that demands for short-term credit are less pressing. It is true that long-term yields on high-grade bonds did not decline much from their levels of late 1974; these rates reflect long-term inflation expectations more accurately than do short-term rates. But in recent weeks, they have risen very moderately in the face of some rather large corporate bond issues and heavy Treasury borrowing, which is encouraging.

The crucial question, however, is: How long will this period of steady interest rates and moderate inflation rates continue? For several years, we will need an annual expansion in current dollar GNP of around 12% (real growth plus inevitable inflation) if any meaningful progress is to be made in recovering from the recession. An annual expansion in the money supply of 5 to 7½%—the Federal Reserve's announced target—is perhaps adequate to finance such a 12% growth in current dollar GNP in the early stages of the recovery, when the demand for bank loans is relatively slack and increases in the velocity of money are normally above average. But if the recovery progresses as it should, and if the Federal Reserve sticks rigidly to its target, money market interest rates will eventually rise again. We find it hard to

believe that the Federal Reserve will allow a major increase in interest rates in an early year, but it could happen.

It is our guess that the Federal Reserve will not induce or permit a significant rise in interest rates, especially long-term rates, in the foreseeable future. Indeed, we would like to see the Federal Reserve to give a bit on its announced targets in order to keep interest rates from rising significantly.

Although the rise in the inflation rate should be modest in the near future, the economy will become increasingly vulnerable to a resumption of serious inflation as time goes on. A basic inflation rate of approximately 6% is built into business plans, consumer expectations and union contracts. There seems to be little prospect of lowering the inflation rate significantly below that figure for several years as long as the economy is moving upward. Even if we could keep the inflation rate steady, even at a figure as high as 6%, we could learn to live with it. What is disruptive to business plans and consumer confidence is the prospect of a rising inflation. It is not known whether inflation can be avoided—whether we can hold the inflation rate close to 6%. A variety of economic events could touch off an irresistible increase in inflationary pressures. Monetary and fiscal authorities must tread a narrow line between providing enough stimulus to maintain the momentum of the recovery and providing so much stimulus that the fires of inflation could be refueled. Failure to stay within these limits could bring the recovery to a stop. We do not anticipate that this will happen in 1976, at least until late in the year, but the possibility is not be ruled out.



The Indiana Economy

Introduction by Morton J. Marcus, Research Economist

Indiana is recovering from a severe recession that pushed unemployment rates for the state above 10% and forced a decline in personal income for two successive quarters. A recovery is under way and, given a moderate sustained national recovery, the Hoosier state will participate fully in a prospering Bicentennial year.

Typically, the Indiana economy reacts vigorously to changes in the national economy. When the oil embargo and curtailed auto sales kept national personal income growth to a low 1.7% in the first quarter of 1974 (see the accompanying table), personal income in Indiana fell by 3.3%. In the second and third quarters of 1974, however, as the nation adjusted to the newly perceived energy crisis and industrial performance improved moderately, Indiana exceeded the national rate of growth in personal income. With the full impact of the recession upon the nation in the fourth quarter of 1974, with massive inventory adjustments interrupting the demand for producers' durables and consumer goods, Indiana began a half-year period of declining personal income while the nation still managed to show minor personal income gains. The first up-tick of recovery in the second quarter of 1975 did not provide Indiana with its accustomed spur.

If the recovery of 1975-76 were led by housing and autos, Indiana would be moving ahead more rapidly than it is currently. Electrical machinery and parts for consumer ap-

pliances and autos flow from our factories when housing and automobile showrooms are crowded with buyers. But these two sectors are not leading the recovery, nor are they expected to give the primary impetus for the nation in the coming year. Until demand signals are strong enough to bring plant utilization nearer to capacity levels, there will be little business investment in new plant and equipment. Steel, which depends on commercial and industrial construction for a significant portion of its demand, thus could have a weak year ahead.

Few will recall October 1974 as a high point in the economic history of Indiana. In October of 1975, however, total employment in the state was 96,000 less than in the preceding October and there is little prospect that the 5.5% statewide unemployment rate of October 1974 can be realized by October 1976. From April through October 1975, 57,000 returned to the payrolls of business and government, but over 176,000 remained unemployed and in a year's time nearly 19,000 persons had left the state's labor market. Although the employment picture continues to improve, there is valid concern for the welfare of those who remain unemployed. The most optimistic projection for the coming year (see the Indianapolis outlook) still implies unemployment in excess of 130,000 persons in the fall of 1976, compared with less than 100,000 in October 1974.

When the full fruits of recovery are realized in Indiana, it will be apparent in the volatile

Quarterly Percent Changes
in Total Personal Income
(Seasonally adjusted at annual rates)

<i>Date by Year: Qtr.</i>	<i>United States</i>	<i>Indiana</i>
1972:2	+1.9	+2.3
3	+2.1	+1.9
4	+3.6	+3.3
1973:1	+2.8	+5.5
2	+2.5	+1.2
3	+2.8	+2.1
4	+3.1	+4.3
1974:1	+0.7	-3.3
2	+2.8	+3.0
3	+3.0	+4.4
4	+1.5	-1.4
1975:1	+0.5	-1.3
2	+2.3	+1.7

SOURCE: U. S. Department of Commerce.

manufacturing sector rather than the more stable service and trade areas. Employment in the government sector in October of 1975 was up by 16,000 from a year earlier, but virtually every private sector component was off from 1974 levels. The *Data Supplement* to the *Indiana Business Review* (issued monthly by the I.U. School of Business) reports that in October 1975 only chemical and furniture industries showed significantly higher levels of activity than in the fall of 1974.

The picture statewide is far from uniform. When the first preliminary monthly estimates of employment and unemployment for all counties were issued for April of 1975 by the Indiana Employment Security Division, forty-eight of the ninety-two counties had unemployment rates of 10% or more, and over 233,000 persons were out of work. Six months later, the preliminary figures showed less than 177,000 unemployed and only twelve counties with unemployment rates of 10% or more. This is a substantial record of recovery.

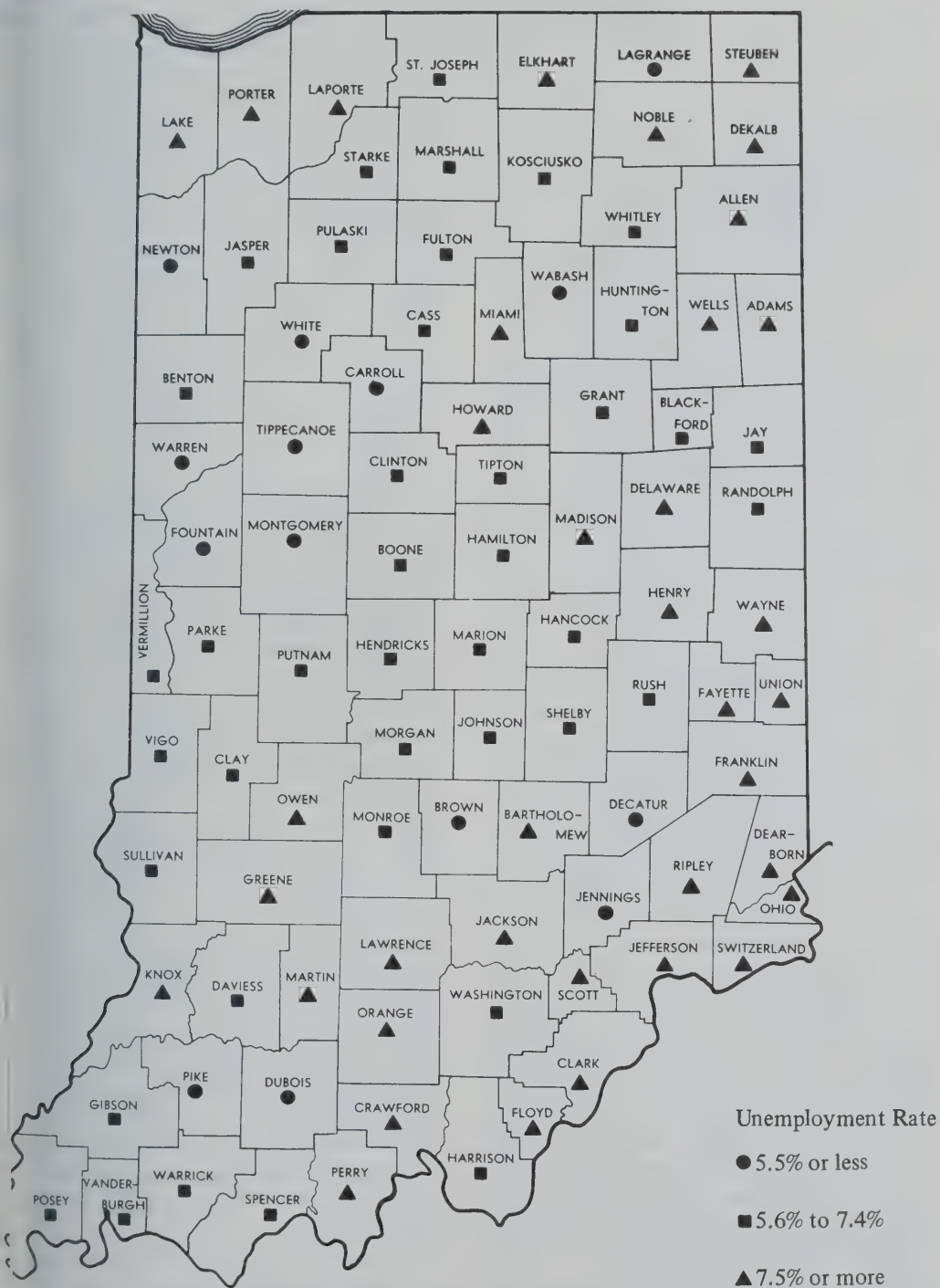
Sparsely populated rural counties still had very low unemployment rates (Warren County's

rate in October 1975 was 1.8 percent). With considering seasonal factors, the spread nearly four percentage points between Laette's 5.4% unemployment rate and Mun 9.3%. In some small counties high rate unemployment reflect small manufact labor forces that can be temporarily ou work while one or two employers adjust ventory levels to current orders. But rate 10% or more were found in October in Gr Jackson, Jefferson and Wayne counties, e with more than 10,000 persons in the la force. In fact, Wayne County (Richmond) the same number of persons unemplo (4,400) as the four-county Terre Haute S dard Metropolitan Statistical Area, which twice as many persons in its labor force. S magnitudes are significant both for the employed and for those businesses depend on their trade.

The accompanying map illustrates diverse pattern of unemployment in India Those counties enjoying unemployment rate or below 5.5 percent (which characterized state in October 1974) are marked with a bl dot. Fourteen counties enjoy this status, incl ing Tippecanoe, Montgomery, Wabash a Decatur counties. Another forty count marked by squares, have current unempl ment rates above the statewide October 19 level, but equal to or below the October 19 rate of 7.4%; the Evansville, Indianapolis, So Bend and Terre Haute areas all have unempl ment rates lower than 7.5%. However, counties are above that level, including those the Fort Wayne, Gary-Hammond-East Chica Muncie and New Albany areas (marked triangles).

This diversity within the state requires tl each area be examined independently develop a comprehensive outlook for t coming year. The following pages include t analyses of professional economic observers eight metropolitan areas around the state. Th views and conclusions, arrived at separat from those of the preceding national p spective, confirm an improved situation I Indiana in 1976.

employment Rates, October 1975
(Data not adjusted for seasonal variation)



SOURCE: Indiana Employment Security Division, *Labor Force Estimates*.

INDIANAPOLIS

EMILY HAWK

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The eight-county Indianapolis SMSA has been severely affected by the 1974-75 recession, but slightly less than the state and the nation. Unemployment rates for the Indianapolis area reached 1958 recession levels in 1975, but, as in 1958 and 1954, remained below state and national rates. In 1975, Indianapolis area unemployment rates averaged 1.2 percentage points below the national rates and 1.5 points below the state rates.

Layoffs in the transportation equipment and related products industries were the major factors in the Indianapolis area recession, as elsewhere, but were less pervasive because of the products manufactured in Indianapolis and the firms involved. General Motors is the major employer in the transportation equipment industry, and the major manufacturing employer, but the Indianapolis plants produce aircraft engines and parts and trucks rather than passenger cars and recreational vehicles and components, which were the first dominoes.

The Indianapolis area does not have major electrical machinery industry firms producing primarily for the automobile industry, as do other areas of the state. Also, primary metals is not a large industry in Indianapolis. Employment in the transportation equipment industry declined by 14% statewide between September 1974 and September 1975, but decreased by only 9% in the Indianapolis area. Electrical machinery employment decreased by 15% statewide, but only 2.7% in the Indianapolis area. Employment in the industry group proces-

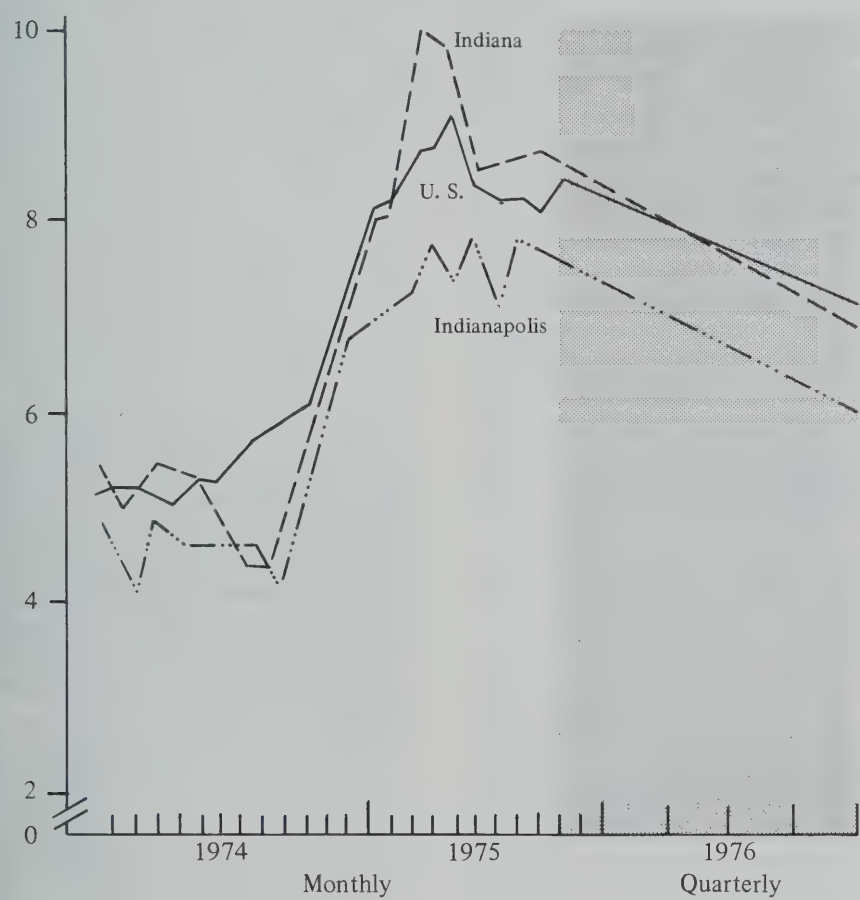
sing steel, aluminum and other primary metals declined by 10.4% statewide (11,900) and 10.3% (400) in the Indianapolis area. Non-electrical machinery, a large industry locally and statewide, showed employment losses of 12.1% and 14.0% respectively.

Although manufacturing industry employment losses were heavier over the state than in Indianapolis, 11.7% compared to 7.4%, non-manufacturing sector employment made very slight gains statewide but showed a decrease of 2.1% in the Indianapolis area. Much heavier construction losses occurred in Indianapolis (14.3%) than in the state (1.9%). Trade also showed heavier losses locally, 2.8%, and 1.3% statewide. Government was the only industry group in the Indianapolis area in either the manufacturing or nonmanufacturing sector to show an employment increase from one year ago. Government employment increased statewide also. Gains were due primarily to public service employment, a recession countermovement measure under the Comprehensive Employment and Training Act.

The recession bottomed out in the Indianapolis area in April. In that month, the Indianapolis industrial activity index dropped to its lowest level, 114.7. In September, it reached 121.5, after fluctuating between 118 and 121 in the intervening months. By March, department store sales in current dollars began to show significant increases over the previous year. Sales in December 1974 were \$43 million down from \$60 million the previous December. In the early months of 1975 they were at near previous year levels. August 1975 sales were about \$38 million; August 1974, \$35 million. October and November sales were encouraging, although special promotions were required as stimulus. This momentum generally continued through the Christmas season, and additional salespersons were hired by many retailers.

Construction remains depressed, especially of multi-family units. In the first three quarters of 1975, the number of apartment buildings

Unemployment Rates, 1974 and 1975 (seasonally adjusted)
 (1976 projection based on 7% national rate by November 1976 and 7% inflation rate)



permits issued was 52% below 1974, and the one-year-ago volume was significantly below 1973. However, 1973 was a record year, and it is commonly believed that apartment units were overbuilt. Single family unit starts were about 1% off from one year ago through October, with the early months of the year slow, but later months above, one year ago.

Unemployment rates have not yet responded to any upturn, although employment increased slightly in Indianapolis and the state in September. The seasonally adjusted unemployment rate for Indianapolis was 7.7% in

September, as high as any rate in 1975. Recall rates in local area manufacturing peaked in April at 3.8 per one hundred workers; since then they have fluctuated between .8 and 1.6. The new hire rate reached 1.0 in July, the highest since November 1974. The latest available rate, that of August, was 1.2; in August 1974, the rate of new hires was 2.3.

The Indianapolis area is suffering from the national maladies: inflation and uncertainty about future inflation. Some of the current 92% of the labor force employed are buying, among other things, cars. The October selling

rate for new cars nationally was the industry's highest in seventeen months, 20% higher than September and October 1974 levels. Alan Greenspan, chairperson of the President's Council of Economic Advisors, predicts an inflation rate down to 7% by November 1976, and a national unemployment rate of 7%. A reasonable projection for the Indianapolis area would be an unemployment rate of about 7% in the first quarter of 1976, down to 6% by the end of the year. Confidence generated by a decline in the rate of inflation could produce an even lower rate, since the Indianapolis economy is basically sound, and unemployment in the area and the state historically falls quickly in recovery periods.

GARY-HAMMOND-EAST CHICAGO (Calumet Area)

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In the November-December 1974 issue of *Indiana Business Review*, we reported that we expected an upturn in the third quarter of 1975. We also suggested potential for a robust demand for autos and a few other items. The replacement cycle was expected to be somewhat protracted. We did not expect much letup on the inflation front, although we underestimated its severity. In the May-June 1975 issue, we indicated that recovery would be relatively flat until about the first quarter of 1976.

Now looking at the revised industrial activity index for this metropolitan area, we note that the continuous downtrend, which began in late 1973, reached a flat bottom the end of July and the beginning of August (indexes were: May, 108; June, 106.1; July, 104.8; August, 106.0; September, 106.5;

October, 105.8). We predict the following sequence of indexes: November, 106.0; December, 109; end of first quarter (1976) about 120; end of second quarter (1976), about 125. To put these local predictions in perspective, we wish to note that the index was above 130 in late 1973. The third quarter of 1976 may be beyond our crystal-gazing capabilities, though we would expect some further improvement beyond that date, if inflation does not exceed 9 or 10% and if there is continued quiet on the energy front.

Index numbers are abstract artifacts; what matters is how they will translate in terms of local employment. In September of 1975, the peak to trough loss amounted to almost 8,000 jobs, with an unemployment rate over 8%. Local steel mills employed 59,000 persons in October 1975, down 1,500 from last October. Steel, on which employment in this area so much depends, is getting a slow start. There are some minor transitional phenomena affecting the slow progress, such as Youngstown's shutting down of an entire twenty-four-oven coke battery, which will be rebuilt in compliance with new state and federal antipollution standards.

Such behavior of steel or heavy manufacturing is not inconsistent with what occurred in past business cycles. In 1957-58, national employment fell for nine months after which time the downward trend was reversed. Local employment continued falling for an additional five months; it took twenty-one months from the trough of the relatively severe 1957-1958 recession to catch up completely with surging national employment rates. In the mild 1969-70 recession, national unemployment rates were consistently higher than local rates. It appears, therefore, that the current upturn may more closely follow the 1957-58 pattern with improvements in local unemployment lagging behind the nation.

Local employment is also affected by the construction industry. This industry has been helped somewhat by tax credits and slightly lower interest rates. However, demand in the

Chicago Consolidated Statistical Area (the CSA, which is the relevant market for local production) is still low by historical standards, and is likely to remain sluggish throughout most of 1976. Compared to the 1973 peaks, permits for building suburban homes dropped almost 40% and the volume may not rebound more than 10% during the first half of 1976. Suburban apartment building permits dropped almost 50% and may not recover more than 30% over the same period. Almost 15% of the units recently built are unoccupied.

Retail trade on the whole has fared better than most sectors of the local economy. Department store sales jumped over their preceding year figures in May, in anticipation of recovery, then as prospects for a brisk upturn dimmed, consumers became more cautious and the recovery in sales slowed down. Currently there seems to be a slight resurgence of confidence, which is expected to carry forward to the first and second quarters of 1976, when local retail spending is expected to continue strong and well ahead of the overall national recovery.

The benefits from stronger retail performance will not be equally distributed over the entire region. With the advent of South Lake Mall (which, though somewhat overextended, appears to be a leading regional shopping center) traffic north of Highway 30 is greatly diminished. For example, major suburban shopping complexes such as the Village Plaza, Gary, downtown Hammond and Woodruff have become localized and have lost most of their customers who reside south of Highway 30. A recent study by the Economics Workshop at Indiana University Northwest indicates that less than 5% of the residents located south of Highway 30 shopped further north, and only 10% of the residents in a band two miles north of U.S. 30 shopped in the older urban centers. Thus, a polarization of retail traffic is emerging with U.S. 30 as the dividing line. This polarization may have significant long run effects, one of which may be a prolonged localized commercial depression in the regions north of U.S.

30, which may accelerate if a rapid retail upturn materializes in the second half of 1976.

A concern of most forecasters is continued high unemployment, possibly about 7.5 to 8% in this region. In order to shed some light on this problem, as well as on the phenomenon of "additional workers," which tended to swell the labor force during the current slowdown, particularly in multiple worker households, the following study was conducted by I. U. economists. A stratified random sample of almost one thousand households was obtained. The aim was to measure the difference between "desired" or "preferred" labor force participation—at given real wages—and actual labor force participation, as conditioned by the current recession. An attempt was made to determine whether the differential depends on the number of workers in the household (head of family, spouse, children of working age), education, occupation, industrial classification, or ethnic and geographical origin (urban, rural, inner city). The technique used was a cross section multiple regression analysis.

These were the findings of the study. People would prefer to work about 9.3 weeks more per year than they are able to work. (The prerecession level was 7.6 weeks.) The employment deficit was positively correlated with age of head of household (highest for female heads). The average number of workers seeking employment was 1.78 per household (the prerecession level was 1.56). Larger families tended to have larger deficits. The deficit per household tended to rise with declining mean household age. The deficit was inversely correlated with number of weeks worked—the highest deficits were recorded for households which worked under ten hours per week or less than twenty weeks per year.

The deficit declined with rising education. The number of workers seeking jobs per household was also inversely correlated with years of schooling. The largest deficits were recorded in retail, clerical and light manufacturing. Steel, metal fabricating and petroleum tended to

show smaller deficits than other industrial classifications (in fact, in a few isolated cases, there was a surplus—persons worked more than they would have preferred). The study strongly suggests an “additional worker” effect, which tends to be correlated with rising prices and falling real incomes. Consequently, the official employment figures may disguise the true pace of the recovery, particularly if prices and wages continue to rise.

FORT WAYNE

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The recent two quarter growth, or more correctly, cyclical recovery, in real GNP has hopefully defined the trough of the 1974-75 recession and signalled an end to the faltering of the Fort Wayne area economy. The recession from which we have emerged has left approximately 10,000 fewer persons employed in the Fort Wayne area. Payroll employment had steadily increased from the 1970 recession figure of 135,000 to 160,000 in 1974, before retreating to the current level of 150,000. This base employment figure marking the end of the recession for the Fort Wayne area has been confirmed twice. The seasonally adjusted October unemployment rate was 9.7%, compared with state and national averages of 8.5% and 8.6% respectively.

Although the local unemployment rate is trending down from the double-digit level toward the national rate, monthly statistics may be erratic. Approximately 4,000 persons have dropped out of the local labor market, and it is difficult to predict the timing of their return. Department store dollar sales in the

Fort Wayne area have returned to approximately 95% of previous year sales. Thus, retail sales are down approximately 15% in real terms from previous year levels.

Eight thousand of the 10,000 decrease in payroll employment resulted from decrease in employment in durable goods manufacturing. Nationally, new orders for durable goods rose during the last part of the year, from an annual \$35.5 billion in March to \$42.8 billion in October. Although the dollar increase was diminished by inflation, the durable goods recovery is real and should be reflected in the first six months of 1976 by the recovery of approximately half the jobs and associated economic activity lost in the last year. The local International Harvester plant has a \$12.5 million contract from New York City for over 30 garbage trucks, but resolution of the New York City problem is not expected to inhibit recovery of the local economy.

Whether the local economy continues its recovery during the last half of 1976 is open to conjecture. Continued recovery will depend on the economy operating much closer to capacity than its current 70%, and a continuance of favorable interest rates. Domestic production of International Harvester trucks as of the end of October trailed previous year production by 42%. Major truck market improvements will not materialize until manufacturing activity increases in general, and only then to the extent that interest rates are conducive to business purchases of transportation equipment. The transportation industry is still saddled with excess capacity resulting from last year's inflationary hedge buying, and additional buying that preceded the institution of new Department of Transportation brake standards which added up to \$2,500 to the price of large trucks.

Economic theory predicts the ultimate demise of cartels, OPEC included. The timing of the demise is uncertain, although signs of stress among OPEC nations are beginning to appear. When crude oil prices do fall, they will create

favorable shifts in consumer purchases of transportation. Motor home sales peaked in January 1973, at a deseasonalized rate of 14,000. In 1975, sales have moved steadily from 6,100 units in January to 9,100 in September. A peak in the price of petroleum products could turn the motor home industry, a vital part of northeastern Indiana's economy, to the growth industry it was until 1973.

The 1976 economic picture could also be viewed as a result of major labor contract disputes. Locally, General Electric, International Harvester, Phelps Dodge, Rea Magnet Wire and Indiana Rod and Wire all have major contracts to be renegotiated.

In summary, economic activity in the Fort Wayne area for the first half of 1976 appears continued to expand significantly from its current base. A continuation of favorable interest rates during at least the first half of the year will be necessary for continued economic expansion during the last half of 1976.

EVANSVILLE

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The Evansville area economy reached the trough of the current recession in May 1975 and began to move upward since June. The accompanying table shows that the composite index of the Evansville Area Business Index rose in June, July and September but lost slightly in August. Even with an upward moving trend, the September index was 3.46% below a year's September level. Local economic performance in 1975 will probably be about 3% below the 1974 level and about 7% below the 1973 level—the best year in the last two decades.

Recovery from the recession is expected to be moderate this year, and the degree of recovery will vary from one sector to another. Industrial production will be about 5% below the 1974 level due to the weak demand for the products manufactured in this area, especially refrigerators and airconditioners. The demands for primary metal, pharmaceutical products and plastic products, however, were not hard hit. In general, industrial production recovery since June did not keep abreast of the national trend. Construction locally experienced a year of low activity along with the rest of the nation. The value of residential construction permits granted from November 1974 to March 1975 was the lowest in the last four years. Commercial and industrial construction activities had similar records from December 1974 to May 1975. However, public construction such as street resurfacing offset some of the decline in private construction activities. Since midyear, the activities in this sector have been rising and will continue to do so for the rest of this year and early 1976.

In trade and services, the recovery has been slow, but is solid and optimistic. The 1975 levels of activities in these industries will probably exceed those of 1974, contrary to the situations in industrial production, construction and transportation. The transportation industry was hit hard this year and declined to a level below the base period 1967-69. This sector is normally closely related to industrial production. Thus, as industrial production recovers, so will the transportation industry. The financial sector has been the most expansionary in the area since 1967, but its rate of growth decelerated in 1975 to about 2-3% in comparison to over 10% in the four previous years.

Payroll employment in the Evansville area reached a peak of 109,300 in 1973, but it declined to 105,700 in September 1975 due to the recession. The growth in employment has begun slowly. Substantial improvement will not come until the beginning of 1976. Compared to

Evansville Area Business Index (1967-69 = 100)

<i>Period</i>	<i>Industrial Production</i>	<i>Trade and Services</i>	<i>Con- struction</i>	<i>Trans- portation</i>	<i>Finance</i>	<i>Employ- ment</i>	<i>Com In</i>
1975							
January	121.65	114.00	91.75	90.04	207.50	98.03	113
February	117.19	122.85	86.91	86.15	205.11	100.16	110
March	117.18	110.09	77.29	87.76	206.70	99.47	111
April	114.82	110.49	80.43	85.27	2031	98.48	110
May	115.48	109.69	77.60	83.96	183.85	98.38	109
June	117.23	111.01	79.66	85.08	193.56	98.46	111
July	129.30	113.32	82.17	86.79	185.96	100.56	117
August	127.30	110.79	80.61	91.06	188.34	100.65	115
September	127.11	113.42	85.43	92.21	194.99	100.25	117
1975 (est.)	122.40	113.00	84.00	93.50	197.00	99.60	114
1976	131-	115-	98-	101-	200-	102-	12
forecast	133	118	102	105	205	103	13

ten other Indiana metropolitan areas, the unemployment rate of Evansville ranked fourth lowest in September 1975.

The Evansville economy in 1976 depends on several national as well as regional factors. It is assumed that inflation may continue at a rate of 6% in 1976 and the unemployment rate may stay around 7%. The real GNP may grow at 6% and the consumer durable goods expenditures may be expected to increase by 10-12% as consumer sentiment is upgraded. The tax cut of 1975 is assumed to continue. Under this circumstance, the Evansville economy should be able to grow to a level higher than 1974 but slightly below 1973.

In terms of the Evansville Area Business Index, the composite index for 1976 should range between 120 to 123, compared to about 115 in 1975. The 1976 growth in real terms may then be about 6.6%, which is in line with the growth of real GNP. Forecasts of the EABI sectors for 1976 are given in the attached table. Industrial production and trade and services will return to near-1973 levels. The financial sector may continue to grow but at a lower rate. Revivals of the construction and transportation industries may bring them back to the 1974 levels. In short, 1976 is not going to be a fantastic year; but it will be a year of solid recovery.

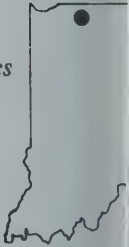
SOUTH BEND-ELKHART

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The South Bend-Elkhart area appears to be recovering from the recent recession faster than most areas of the state and the nation. The seasonally adjusted unemployment rate in South Bend decreased from 9.1% in May to 6.6% in September. In Elkhart, unemployment has decreased from a high in January of 14.1% to the September rate of 7.2%. These rates compare very favorably with the national unemployment rate, which increased from 8.3% in September to 8.6% in October, and they also compare favorably with the Indiana rate of 8.7% for September.

The accompanying table of South Bend-Elkhart area economic indicators suggests that the local economy turned around during the second quarter of 1975. Industrial electricity sales reached minimum levels in March for both South Bend and Elkhart, and industrial natu-

ected Economic Indicators for the South Bend-Elkhart Area, 1975
 7 = 100, seasonally adjusted)

<i>Indicator</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>
Industrial electricity	107.9	121.4	116.7	117.6	117.3	119.4
Natural gas sales						
Commercial	148.1	145.1	135.5	101.9	115.7	130.8
Industrial	125.4	119.9	92.8	94.8	86.6	101.3
Bank debits	199.0	195.9	210.5	204.6	208.2	211.2
Nonagricultural employment	106.7	105.3	105.2	105.2	105.0	105.9
Help wanted index	55.2	51.6	57.4	66.9	72.4	65.5
Unemployment rate (percent of work force)						
South Bend	8.1	8.5	9.1	8.6	7.0	8.6
Elkhart	13.5	11.7	9.8	9.8	8.8	7.4
New passenger car sales	106.2	88.1	93.4	101.0	99.2	103.9
New truck sales	159.7	145.5	124.1	180.9	161.1	154.9
Estimated value of new housing permits	162.1	136.0	143.7	236.9	239.3	234.4

SOURCE: *South Bend Area Economic Indicators Monthly Bulletin*, Bureau of
 Business and Economic Research, Indiana University at South Bend.

sales were lowest in May. Both South Bend and Elkhart bank debits reached minimum levels in April, as did the South Bend help wanted index. New passenger car sales bottomed out in April, and new truck sales reached minimum levels in May. The estimated value of new housing permits hit its 1975 low in April. Employment indicators have lagged behind the other indicators, with total nonagricultural employment and manufacturing employment reaching lows in July, while nonmanufacturing employment hit bottom in June.

The recovery appears to be strong and well based. Production indicators such as industrial electricity sales and industrial natural gas sales increased approximately 10% from the minimum levels in the second quarter. Retail business and consumer spending as reflected by bank debits, commercial natural gas sales and new car and truck sales has also increased.

Total bank debits are up approximately 6%, commercial gas sales are up nearly 30%, new car sales are up 10%, and new truck sales are up 30%. In fact, 65% of the August indicators exhibited favorable increases from July, marking the third consecutive month that a majority of the indicators have increased from the previous month. It has been nearly two years since a majority of the indicators have increased for three consecutive months.

One bright spot in the local economy has been new housing starts. The index of the estimated value of new housing permits in St. Joseph County has increased 109%, from the 1975 low of 136.0 in April to the October level of 283.9. Starting in June, the index has exceeded 200 for five consecutive months. Until this recent upsurge, the index had never exceeded 200 for more than two consecutive months. Unfortunately, this high level of con-

struction activity is threatened by the recently announced departure of Associates Corporation of North America from the South Bend area.

On November 13, 1975, the Associates Corporation of North America announced that its administrative offices, which employ approximately 550, would be moving to Dallas, Texas. According to Associates, the move could begin as early as the summer of 1976 if suitable facilities can be found immediately. Since the corporation has not yet found suitable land or buildings in Dallas, the move may be delayed.

Although the actual loss of jobs from Associates' departure may not occur until the fall of 1976 or later, the *anticipation* of the move will be a consideration of local businessmen as they weigh expansion plans during the recovery. Residential construction, local retailing and local service firms may be cautious in expanding their operations. Thus, the local recovery may be weaker throughout 1976 as the local economy starts adjusting to the loss of 550 jobs. The major impact will probably be felt in the months immediately following the move as the lost export income reduces regional spending by a multiple amount. This will most likely occur in 1977.

These short-term effects are contingent on the nature, composition and timing of a significant, but nonetheless marginal change in the local economy. In the past, the South Bend-Elkhart area has adjusted to other changes, including the Studebaker curtailment of the last decade. Although the present impending loss of the Associates Corporation does introduce uncertainties for public and private decision making, it is desirable to have these introduced when economic movement is upward. The resulting changes will have to be seen in light of the overall economic situation.

Local recovery could also be affected by two national factors. A substantial portion of local manufacturing is exported to other parts

of the United States and to foreign countries. In addition, local credit conditions and prices are influenced by national trends. Thus, a major relapse of the national recovery or a substantial rise in national interest rates would damage local recovery. Local indicators suggest a strong and prolonged recovery from the recent recession, but the consequences of the loss of Associates' administrative offices and the uncertainty of the national recovery dampen optimism. The local economy should be characterized by a moderate recovery during the first half of 1976, but a leveling off during the second half of the year.

TERRE HAUTE

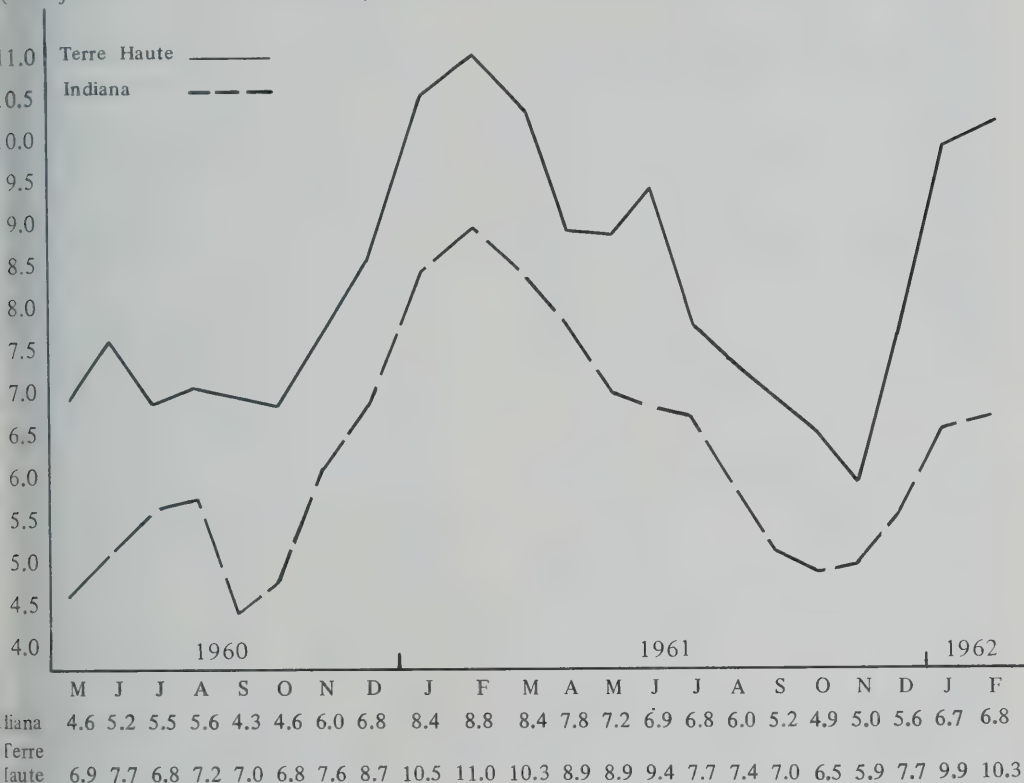
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The Terre Haute Standard Metropolitan Statistical Area (SMSA) includes Vigo, Clay, Sullivan and Vermillion counties. From 1950 through 1963 the average annual unemployment rate was above 6%, and the SMSA was considered to be an area of substantial unemployment. Then from 1964 until 1975, the annual unemployment rates remained below that level. For the first three quarters of 1975, however, the average monthly rate on an annual basis moved above the 6% level, to 6.8%. Even so, this is well below the national and state rates over the same period.

Another way of looking at this is to compare the rate of unemployment in Indiana and the Terre Haute area. This is done in the accompanying figures. The analysis was performed for three periods, although only two are shown in the charts. In the first case the seasonally unadjusted monthly rates for the

Indiana-Terre Haute Unemployment, May 1960–February 1962
(Unadjusted for seasonal variations)



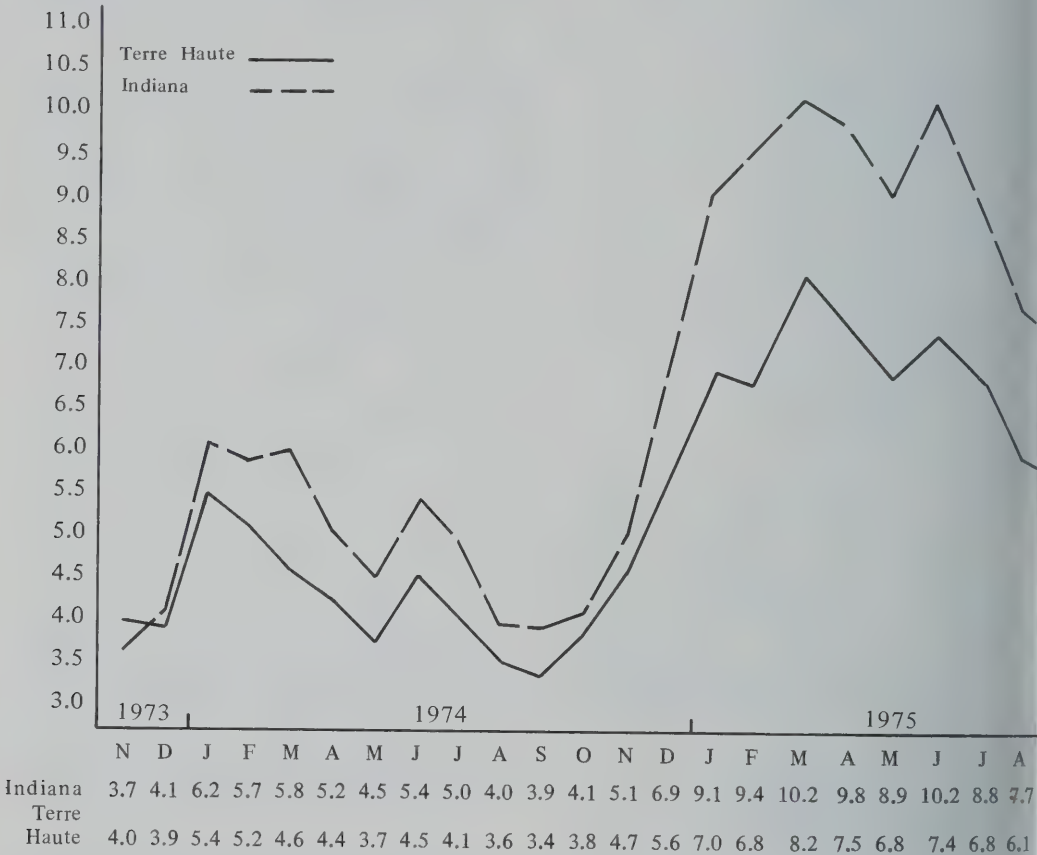
SOURCE: Indiana Employment Security Division

Terre Haute SMSA are compared to those of Indiana from the reference peak of May 1960 through the trough of February 1961 and one year into the ensuing expansion. During that period, the Terre Haute area unemployment rate averaged almost two percentage points above that of Indiana. A similar comparison was made for the 1969-70 recession and in that case there was no conclusive difference between the Indiana and Terre Haute economies.

A third comparison was made of the Terre Haute area unemployment rate to the Indiana rate on both a seasonally adjusted and unadjusted basis over the recent recession and up to the present point of the recovery. For this analysis it was assumed that the peak month

was November 1973 and the trough month May of 1975. Thus, the duration of the recovery phase data amounts to only four months. The unadjusted rates are presented primarily for comparison purposes since the adjusted data are not available for the early '60s. However, in both cases, the Terre Haute SMSA rate is consistently below that of the state. The seasonally unadjusted rate averages 1.2 percentage points below the rate for Indiana. On a seasonally adjusted basis, the local area rate averages 1.6 percentage points below that of the state. Thus, Terre Haute has changed from having relatively higher levels of unemployment than the state as a whole, to experiencing better performance than the state average.

Indiana-Terre Haute Unemployment, November 1973–September 1975
(Unadjusted for seasonal variations)



SOURCE: Indiana Employment Security Division

Several reasons can be offered for this change in the level of economic performance. The first is Terre Haute's attraction of new industry and the expansion of existing firms. Recent newcomers to the area are Ivy Hill Packaging, Great Dane Trailers and Inland Container. Firms that have expanded are the Bemis Co., Eli Lilly and Columbia Records. Thus, the character of the area has changed from one heavily populated with declining industries and concomitant secular unemployment to an area of new and expanding industry.

The second reason is diversification. While employment in stone, clay and glass production, mining and quarrying, transportation

and food products has declined, employment in the wholesale and retail trade, services, chemicals and government has expanded. Consequently, employment is more diversified and less heavily concentrated in cyclical industries. This means that the area is less affected by recessions than in the past.

The third reason is the nature of the recession, which particularly affected automobile production and construction, raising the average rate of unemployment in other parts of the state. This analysis has largely dealt with long-term or secular changes in the relative level of the unemployment rate rather than the

short-term or cyclical changes in the unemployment rate. Thus, the Terre Haute SMSA went into the present recovery at a higher level of activity than the state generally. To the extent this region is less dependent upon the automobile industry, there is reason to believe the increase in economic activity might be faster than in other areas of the state. This process would be enhanced by continued attraction and expansion of industry.

An exception to the rather expansionist activity of the region would be construction and related fabricated metals industry. Considerables which relate to construction in the Terre Haute area concern the growth of the regional demand for electric power, decisions in regard to government installations and the effects of the natural gas "shortage" in parts of the region with the largest most recent growth.

SOUTHEASTERN AREA

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The Louisville area, like the rest of the nation, is slowly emerging from the recession. The business activity indexes in the accompanying table indicate that the local economy reached a low point in March—with industrial production below the 1967 level—then improved slightly during the second quarter, gained a little more momentum during the third quarter, and showed increasing vigor during September and October. Despite this improvement, economic activity has not quite regained the level of a year ago. The actual lag is somewhat more pronounced than shown in the table, since some components of the trade and services, construction and financial indexes are not adjusted for the effects of inflation.

During the first few months of 1975, the unemployment rate for the five-county metropolitan area (Clark and Floyd Counties in Indiana, and Jefferson, Oldham and Bullitt Counties in Kentucky) remained well below the national average, but the rate has not been below 8.1% (not seasonally adjusted) since May. In October, 8.5% of the resident labor force were still unemployed. Except for the expected seasonal increase during July and August, total employment has fluctuated between 350,000 and 355,000. October's 351,000 was 6,000 below the October 1974 level. In more prosperous years, employment has increased by about 14,000 jobs.

As usual, Floyd and Clark County residents experienced higher levels of unemployment than the rest of the five-county area. Their unemployment rate increased from 4.8% in September 1974 to 10.9% in June 1975, and still registered 9.4% in October 1975 (not seasonally adjusted). October's payroll employment for establishments located in the two Indiana counties totaled 39,200—2,300 fewer than a year ago; indeed, the lowest level of establishment employment since October 1972.

While nonmanufacturing employment increased over the year, employment in manufacturing fell by 4,300 workers, a 29% decline. Most of the decrease was concentrated in three areas: wood products, hard hit by the home building depression; transportation equipment, belatedly feeling the recession's impact; and the ordnance industry, where Defense Department decisions have eliminated nearly 4,000 jobs in the last year, with further permanent layoffs anticipated. The six-year contraction of the ordnance industry dampened the local economy even in healthier year; since the February 1969 peak more than 18,000 ordnance jobs have been permanently lost.

The rest of the metropolitan area experienced more widespread curtailments, but the most seriously affected industries were

Index of Louisville Area Business Activity
(1967 = 100, seasonally adjusted)

	<i>October</i> <i>1974</i>	<i>March</i> <i>1975</i>	<i>August</i> <i>1975</i>	<i>October</i> <i>1975</i>
Industrial production	118.8	95.8	106.4	112.1
Transportation	152.5	140.0	149.3	152.6
Trade and services	122.2	120.7	120.8	122.4
Construction	132.5	102.4	138.1	127.2
Financial	258.8	256.3	261.8	271.0
Employment	117.9	116.7	118.5	116.4
<i>Composite index</i>	<i>137.6</i>	<i>126.0</i>	<i>133.2</i>	<i>136.0</i>

SOURCE: Research Department, Louisville Area Chamber of Commerce.

those related to construction, particularly appliance manufacture, and the manufacture of machinery and transport equipment.

Retail sales (other than automobiles) held their own reasonably well, considering the severity of the recession. Although data are not available to explain this development fully, a few contributing factors may be suggested. Sharper spending cutbacks may have occurred in services and other areas not clearly reflected in the local business indexes. The efforts of many employers to hold down permanent layoffs through shorter work weeks and occasional temporary layoffs probably helped to keep local spending from falling as sharply as production. And, as expected, a further cushioning effect came from the large payments of unemployment compensation, which in Floyd and Clark Counties alone amounted to over \$14 million during the first ten months of 1975, compared with \$4.4 million during the same months of 1972.

The future looks much brighter than the recent past. Both output and employment should continue to increase, although rather slowly and unevenly at first. More intensive use of the present workforce will dilute employment gains, and further layoffs in transport

equipment and ordnance will offset some of the recalls for the next few months. But production is strengthening, and there are indications both residential and commercial construction will pick up noticeably by next spring. This may be a welcome stimulus to wood products, appliances and other industries related to construction. Unless the national recovery is expectedly aborted, the Louisville area economy should be enjoying a fairly vigorous expansion by the summer and fall of 1976.

Another area of concern, unrelated to the business cycle, is already causing some uncertainty here. It appears that antibusing forces "retaliating" by refusing to support the current Metro United Way fund drive, with dire effects on the campaign thus far. Unless large amounts of funds are forthcoming, many important health and social services will have to be sharply curtailed. This may mean that many of the area's less fortunate citizens—the sick, the handicapped, the elderly and the underprivileged—will be worse off, instead of benefiting from the economic gains anticipated in 1976.

MUNCIE

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The robust 13.2% rise in national real GNP during the third quarter exceeded the expectations of most economic forecasters. Interpretations of this vigorous growth and coming year's projections are varied. Some observers believe that a renewed burst of inventory liquidation in a faltering fourth quarter will be followed by an irregular but essentially flat 1976. Others contend that, given the probable monetary expansion,

mix of an election year, double digit inflation will again manifest itself by midyear, thereby dampening the upturn in consumer spending and housing, thereby aborting the recovery. A third scenario anticipates a 3-4% growth rate in the fourth quarter, with all sectors moving up moderately in 1976, and election year monetary and fiscal policies having their major effect in 1977. This author assigns a 65% probability to this latter projection and views the Muncie SMSA within this framework.

Seasonally adjusted unemployment in Muncie as of mid-September was 11.8% of the labor force, highest of any SMSA in Indiana. Indeed, the Muncie SMSA (co-equal to Elkhart County) has averaged over 10% unemployment since March—a rate consistently higher than most other SMSAs in the state. Since unemployment and economic activity in Muncie tend to lag the nation in cyclical upturns, an faltering of the nation's recovery, or a continuation of stagflation by mid-1976 would have deleterious effects on Muncie's employment pulse. The closing of two W. T. Gruen department stores and a metal fabricating plant added to the area's unemployment woes.

A particularly noteworthy development in the Muncie SMSA was General Motors' decision to move ahead with construction of a new Delco Remy Operation plant. The complex will be located on 100 acres in Muncie's Industrial Park and will be built in phases. Phase one will consist of two manufacturing buildings totaling a total of 330,000 square feet of floor space, to be completed by June of 1976. The new plant is not expected initially to provide additional employment in the community as it will simply replace an outmoded plant built in 1960.

The Ball Corporation's new \$6.5 million glass building is nearly completed and, when viewed in conjunction with other buildings constructed in the past ten years, has substantially improved the silhouette of the downtown

area. Walnut Street Plaza, which formally opened on November 6, is an \$800,000 downtown renovation aimed at enticing shoppers away from suburban plazas and malls. This will be a slow process, but most would agree the downtown area has been improved aesthetically.

Looking at local economic indicators (not seasonally adjusted), industrial electricity sales declined 10%; estimated manufacturing payroll declined .13% and auto-truck sales declined 26% in the year ending August 1975. Department store sales in current dollars increased 3.8% for the comparable time period and bank debits increased 29%. Some of this hefty increase in bank debits may represent resumed intermediation along with an upturn in loans.

According to data supplied by the Indiana Michigan Electric Company, the number of new single family homes completed in the first ten months of 1975 decreased by less than 3% compared with the comparable 1974 time frame. For apartment completions and new mobile home meter installations, the decrease was 15% and 5.5% respectively. However, September and October of 1975 posted above seasonal gains in residential units completed. It is perhaps not superfluous to add that the 1974 base figures are extremely low compared to those reflecting the building boom of 1973. The F. W. Dodge Division of McGraw-Hill reported residential construction totaled approximately \$14 million in 1975, as opposed to \$13 million in the comparable 1974 period. Deflating these current dollars figures would, of course, yield a decline in real dollar outlays.

Responses garnered from a sampling of the many small machine tool shops in the community indicate many are experiencing severely depressed operations with many layoffs accompanying the dwindling backlog of orders. Some of these shops which had previously subcontracted work from the General Motors Delco-Remy plant in Anderson have been forced to

seek new business elsewhere, as the GM firm has shifted to using plastic and other substitutes for the more expensive zinc die-castings.

What is ahead for 1976? The Ball State Bureau of Business Research, under the direction of Dr. Joseph Brown, has compiled a new composite Muncie Business Index. Generalizing, this composite index peaked in April of 1974, and remained nearly at that level through October, only to plummet 9% during November and December of 1974. From that point through August of 1975, the index has experienced minor changes, but a slight upward trend dating from March 1975 appears to be in the making.

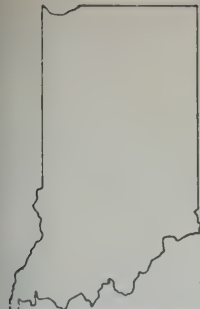
The crux of Muncie's high unemployment problem centers in the net loss of 2,900 jobs in

durable goods manufacturing in the year ending September 1975. Two-thirds of this loss was in transportation equipment firms, among which Warner Gear is the major employer. If the nation's October auto sales increase is maintained, some augmentation of Warner Gear's work force will probably occur during 1976. Even under optimum conditions, however, a return to the Warner Gear employment level of 1970-74 would require nearly two years, if optimum conditions are hardly optimum at Warner Gear. After allowing for Muncie employment to follow the business cycle, some improvement in the transportation sector still seems reasonable and probable, and therefore the Muncie economy may perform modestly better in 1976, with unemployment averaging near the 8.5% mark.

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Bernard Faulkner, Gladys Huang, Judy Norman and Richard Spiers

UNITED STATES—INDIANA BUSINESS INDICATORS*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES			INDIANA		
	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT						
Agricultural employment	Oct. 117.7	117.4	119.7	Oct. 110.3	109.6	114.5
Manufacturing employment	Oct. 95.2	94.7	102.7	Oct. 91.6	91.4	103.3
Average weekly hours (no.)	Oct. 39.9	40.2	40.1	Oct. 39.7	40.4	40.7
Average weekly earnings (\$)	Oct. 195.91	196.58	183.26	Oct. 223.91	225.84	212.45
Nonmanufacturing employment	Oct. 127.0	126.8	126.6	Oct. 122.5	121.9	121.8
Unemployment rate (%)	Oct. 8.6	8.3	6.0	Oct. 8.5	8.7	5.5
Unemployment rate—married males (%)	Oct. 5.2	5.3	3.0	—	—	—
Continued unemployment claims	—	—	—	Oct. 348.9	410.3	200.8
PRODUCTION						
Bituminous coal production	Sept. 111.6	104.2	115.1	Oct. 123.4	133.7	113.2
Industrial electricity production	Aug. 134.8	133.0	145.9	—	—	—
Industrial electricity sales	—	—	—	Sept. 137.0	132.4	142.1
Manufacturing production	Oct. 114.7	114.2	124.6	Sept. 127.5	121.7	132.7
Raw steel	Aug. 89.2	82.7	122.0	Sept. 127.3	113.6	141.5
CONSTRUCTION						
Construction activity—total	Sept. 168.1	162.5	172.1	Sept. 163.2	161.1	180.9
Residential housing starts	Oct. 113.5	98.7	86.1	Sept. 102.8	100.1	123.0
Residential expenditures	Sept. 170.2	165.8	180.8	Sept. 224.6	229.1	277.7
Nonresidential expenditures	Sept. 167.1	160.9	167.8	Sept. 132.3	133.7	142.2
Public expenditures	Sept. 158.6	148.5	149.8	—	—	—
Public works and utilities	—	—	—	Sept. 142.3	135.0	124.8
OTHER INDICATORS						
Checks to demand deposits	Sept. 336.7	336.6	320.8	—	—	—
Personal income per capita (\$)	—	—	—	1975 II 5,325.49	5,429.02	5,165.85
Bank debits	Sept. 5,936.5	5,873.9	5,551.4	Sept. 323.6	327.1	336.9
Passenger car sales (thousands)	Oct. 889.0	726.0	757.0	Sept. 18.9	17.6	17.1
Year to date (thousands)	Oct. 7,195.0	6,306.0	7,760.0	Sept. 156.9	138.0	185.8

SOURCE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Subscriptions to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

Spendable Average Weekly Earnings by County (first quarter 1975)

(Editor's Note—This series is produced from data provided by the Indiana Employment Security Division. It is derived deducting federal income taxes and social security taxes from gross average weekly earnings for each county.)

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings (In Thousands)	% Change Since Last Quarter
		All	Manufacturing	All	% Change Since Last Quarter	Manufacturing	% Change Since Last Quarter		
Adams	7,300	149.73	168.40	130.73	-8.9	145.01	-7.9	954,261	-1
Allen	112,634	188.35	241.04	160.57	-2.4	201.67	-2.1	18,085,926	-1
Bartholomew	24,840	214.98	252.35	181.34	-4.3	210.40	-4.3	4,504,655	-1
Benton	1,664	157.26	135.55	136.54	-4.7	119.73	1.5	227,242	-1
Blackford	3,311	155.20	179.45	134.95	-5.6	153.63	-8.0	446,764	-2
Boone	5,545	146.34	190.46	128.11	1.4	162.22	7.4	710,420	-
Brown	649	88.93	122.24	82.86	-1.8	109.33	-5.1	53,747	-3
Carroll	2,572	134.71	139.66	119.08	-1.5	122.94	2.9	306,303	-
Cass	10,782	159.38	185.24	138.17	-4.2	158.15	-3.4	1,489,813	-1
Clark	19,776	161.45	202.76	139.74	-1.4	171.81	0.4	2,763,445	-
Clay	2,763	134.68	144.59	119.05	-1.0	126.76	-4.5	328,942	-1
Clinton	6,524	142.83	164.40	125.40	-4.2	141.96	-0.2	818,131	-1
Crawford	514	120.86	102.34	108.26	0.8	93.60	4.5	55,682	-1
Daviess	4,841	125.71	149.34	112.04	-4.3	130.43	-3.0	542,434	-1
Dearborn	6,463	182.54	225.80	156.04	-4.2	189.78	-3.8	1,008,442	-1
Decatur	4,891	149.27	173.27	130.37	-9.4	148.81	-12.4	637,692	-1
Dekalb	8,008	161.80	198.07	140.00	-1.9	168.15	2.4	1,121,188	-1
Delaware	36,100	186.69	243.65	159.28	-2.0	203.71	-2.0	5,749,996	-1
DuBois	11,343	139.64	148.95	122.93	-6.4	130.12	-8.1	1,394,339	-1
Elkhart	50,071	177.75	204.62	152.30	-2.7	173.26	-1.9	7,626,114	-1
Fayette	9,227	196.11	234.41	166.63	9.0	196.50	15.3	1,537,401	-18
Floyd	10,458	150.09	174.25	131.00	-0.9	149.57	2.7	1,370,001	-9
Fountain	3,738	151.19	181.57	131.85	2.8	155.28	7.7	492,823	-3
Franklin	1,181	112.86	130.94	101.93	-10.6	116.13	-12.0	120,412	-43
Fulton	3,847	139.95	164.34	123.17	-10.8	141.91	-0.2	473,880	-36
Gibson	6,054	156.31	202.37	135.80	-0.4	171.51	-0.5	822,152	-3
Grant	24,465	182.53	219.43	156.03	-1.0	184.82	1.9	3,817,357	-12
Greene	3,440	122.33	112.76	109.40	0.0	101.85	-7.3	376,339	-7
Hamilton	10,873	164.62	195.75	142.12	-1.6	166.35	-0.8	1,545,244	-8
Hancock	4,979	194.09	311.43	165.05	14.2	255.52	24.7	821,730	7
Harrison	2,996	139.77	163.47	123.03	1.0	141.26	5.5	368,558	-8
Hendricks	5,930	155.33	190.58	135.05	2.1	162.31	10.5	800,829	-2
Henry	9,701	159.48	199.49	138.25	-14.8	169.26	-24.3	1,341,198	-23
Howard	31,256	209.26	257.39	176.88	-5.9	214.17	-5.9	5,528,708	-20
Huntington	9,590	143.56	161.44	125.97	-0.5	139.73	1.0	1,207,977	-10
Jackson	7,802	145.18	155.69	127.22	-3.9	135.32	-4.5	992,585	-19
Jasper	3,927	141.29	146.81	124.22	-2.8	128.47	-2.2	487,835	-11
Jay	5,773	161.39	190.25	139.69	3.3	162.06	6.8	806,410	-7
Jefferson	7,532	145.52	154.69	127.48	-4.5	134.55	-8.9	960,127	-11
Jennings	3,261	141.92	149.95	124.70	2.0	130.90	-5.7	406,692	-12
Johnson	11,059	136.72	179.10	120.65	-6.6	153.36	-9.2	1,334,272	-19
Knox	8,580	143.62	195.81	126.01	-2.5	166.39	-1.6	1,081,190	-8
Kosciusko	15,150	156.69	186.40	136.10	-5.5	159.05	-4.8	2,061,905	-14
Lagrange	3,676	142.66	166.82	125.27	-8.9	143.78	-6.4	460,501	-17
Lake	173,448	226.33	279.35	190.20	-3.6	230.49	-4.0	32,989,422	-8
Laporte	31,977	172.62	200.14	148.30	0.2	169.77	1.2	4,742,304	-6
Lawrence	6,959	174.90	223.92	150.08	-1.0	188.32	4.4	1,044,421	-13

Table Average Weekly Earnings by County, Co

ATORS

County	Employment	Average Weekly		(\$ billions)	Percentage Change at Annual Rates				Sept. 1974
		Earnings			1974 Qtr	1975 3rd Qtr	1975 2nd Qtr	1974 3rd Qtr	
		All	Manufacturing						
Alameda	41,143	214.85	278.87	6.3	18.6	7.0	9.7	257.8	
Alameda	317,329	202.97	263.47	13.1	13.2	1.9	-1.9	178.4	
Alameda	8,523	155.71	188.44	39.9	4.0	4.0	4.0	122.9	
Alameda	1,563	130.41	147.24						
Alameda	5,890	138.71	155.82	12.3	6.5	8.1	10.8	317.6	
Alameda	27,453	156.39	148.42	11.3	13.5	11.6	15.7	153.4	
Alameda				5.8	113.9	-32.0	-10.9		
Alameda	9,000	192.37	246.46					319.1	
Alameda	4,623	133.52	174.97	57.0	96.2	57.1	62.8	153.7	
Alameda	2,013	119.98	126.30	53.6	-1.7	-6.4	25.8	167.2	
Alameda	7,118	146.76	168.18	-1.9	-	-	-		
Alameda	251	98.63	149.35					208.9	
Alameda								168.4	
Alameda	3,353	122.86	130.05					148.5	
Alameda	934	114.74	164.51						
Alameda	1,588	129.00	127.31					135.0	
Alameda	4,390	139.36	151.24					139.5	
Alameda	2,362	241.15	137.91						
Alameda	24,973	215.18	275.30	152.8	Oct.	8.1	5.7	11.3	283.3
Alameda	5,270	187.99	229.17	166.9	Oct.	16.7	1.4	16.4	332.7
Alameda	1,726	153.98	181.53	171.6	Oct.	23.5	7.9	41.0	139.0
Alameda	5,048	157.10	205.52						493.8
Alameda	7,621	162.15	181.24	281.6	Oct.	-2.8	2.1	3.9	128.0
Alameda				607.6	Oct.	4.1	4.9	8.7	
Alameda				258.0	Sept.	-65.6	68.5	-91.2	251.6
Alameda	5,227	172.88	218.11	247.6	Sept.	13.6	15.8	4.5	204.0
Alameda	2,845	147.61	193.95	32.1	-	-	-	-	
Alameda	77,201	180.01	227.35	9.2	-	-	-	-	213.3
Alameda	2,787	136.42	153.69	11.7	-	-	-	-	222.8
Alameda	7,644	144.01	160.84						163.1
Alameda	2,009	133.40	141.48						132.8
Alameda	2,674	138.65	172.90						181.0
Alameda	4,661	141.89	179.58						
Alameda	2,741	162.19	115.31						294.6
Alameda	763	106.35	104.18						218.3
Alameda									173.6
Alameda	38,355	187.95	246.86						202.9
Alameda	2,247	165.74	213.77						180.3
Alameda	586	140.28	174.52						131.2
Alameda	63,096	170.98	209.14						
Alameda	2,657	210.72	294.72						184.1
Alameda	37,772	165.76	190.36						259.6
Alameda	9,950	155.11	181.15						124.2
Alameda	1,078	168.36	0.00						231.4
Alameda	7,568	259.86	321.22						163.0
Alameda	3,579	120.98	123.22						184.6
Alameda									
Alameda	24,350	170.90	214.26						
Alameda	5,524	159.95	198.68						
Alameda	4,490	136.44	150.09						
Alameda	4,985	146.09	163.23						
Alameda	42,416	214.38	284.47						
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Spendable Average Weekly Earnings by County, *Continued*

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings (In Thousands)	% Change Since Last Quarter
		All	Manu- facturing	All	% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter		
Madison	41,143	214.85	278.87	181.24	1.8	230.12	5.5	7,456,881	-11.0
Marion	317,329	202.97	263.47	171.98	1.9	218.55	4.8	54,573,105	-4.0
Marshall	8,523	155.71	188.44	135.34	0.1	160.64	4.5	1,153,505	-8.8
Martin	1,563	130.41	147.24	115.72	-14.8	128.81	-7.3	180,825	-18.0
Miami	5,890	138.71	155.82	122.20	1.1	135.43	2.1	719,810	-11.4
Monroe	27,453	156.39	148.42	135.86	1.6	129.72	-6.9	3,729,944	-5.0
Montgomery	9,000	192.37	246.46	163.71	4.9	205.90	5.8	1,473,377	2.0
Morgan	4,623	133.52	174.97	118.15	-3.6	150.14	-0.1	546,188	-8.7
Newton	2,013	119.98	126.30	107.56	-4.0	112.50	-6.3	216,491	-25.2
Noble	7,118	146.76	168.18	128.44	-3.4	144.84	-0.8	914,203	-18.7
Ohio	251	98.63	149.35	90.63	-2.5	130.43	37.4	22,718	-13.8
Orange	3,353	122.86	130.05	109.82	-4.3	115.43	3.1	368,173	-23.6
Owen	934	114.74	164.51	103.42	-5.6	142.04	-0.8	96,626	-14.4
Parke	1,588	129.00	127.31	114.61	-1.2	113.29	-3.5	181,968	-8.0
Perry	4,390	139.36	151.24	122.71	-2.7	131.89	-1.3	538,696	-8.2
Pike	2,362	241.15	137.91	201.76	12.7	121.58	11.6	476,617	17.4
Porter	24,973	215.18	275.30	181.50	-5.1	227.33	-7.2	4,532,609	-8.7
Posey	5,270	187.99	229.17	160.29	-3.9	192.41	-5.3	844,686	-7.6
Pulaski	1,726	153.98	181.53	134.01	3.3	155.25	7.1	231,294	-9.8
Putnam	5,048	157.10	205.52	136.41	-0.8	173.97	5.5	688,611	-11.5
Randolph	7,621	162.15	181.24	140.27	-4.9	155.03	-4.1	1,069,012	-14.0
Ripley	5,227	172.88	218.11	148.51	1.8	183.79	4.1	776,193	1.1
Rush	2,845	147.61	193.95	129.09	-4.2	164.94	-4.4	367,264	-9.3
St. Joseph	77,201	180.01	227.35	154.07	-2.2	190.99	-1.9	11,894,188	-8.5
Scott	2,787	136.42	153.69	120.41	-3.0	133.78	-1.5	335,589	-24.3
Shelby	7,644	144.01	160.84	126.31	-5.8	139.28	-3.6	965,542	-16.9
Spencer	2,009	133.40	141.48	118.05	2.9	124.36	-6.2	237,206	-7.7
Starke	2,674	138.65	172.90	122.15	-2.1	148.52	0.2	326,642	-12.5
Stueben	4,661	141.89	179.58	124.68	0.0	153.73	2.5	581,125	-11.1
Sullivan	2,741	162.19	115.31	140.30	1.9	103.87	-24.7	384,598	2.1
Switzerland	763	106.35	104.18	96.78	-16.0	95.06	-21.7	73,808	-30.1
Tippecanoe	38,355	187.95	246.86	160.26	5.3	206.21	6.4	6,146,864	1.9
Tipton	2,247	165.74	213.77	142.96	-3.5	180.40	2.6	321,287	-17.1
Union	586	140.28	174.52	123.43	-3.9	149.79	-3.8	72,329	-5.8
Vanderburgh	63,096	170.98	209.14	147.02	-4.0	176.79	0.9	9,276,701	-14.8
Vermillion	2,657	210.72	294.72	178.02	14.1	242.48	27.9	473,003	10.6
Vigo	37,772	165.76	190.36	142.98	-1.1	162.14	-0.8	5,400,542	-6.0
Wabash	9,950	155.11	181.15	134.88	-0.6	154.96	2.2	1,341,985	-15.7
Warren	1,078	168.36	0.00	144.98	-1.1	0.00	0.0	156,241	-6.4
Warrick	7,568	259.86	321.22	215.95	6.2	263.15	5.7	1,634,302	7.6
Washington	3,579	120.98	123.22	108.36	-3.6	110.10	-5.7	387,841	-18.3
Wayne	24,350	170.90	214.26	146.96	0.4	180.78	2.8	3,578,476	-8.8
Wells	5,524	159.95	198.68	138.61	-3.0	168.63	1.6	765,695	-12.3
White	4,490	136.44	150.09	120.43	-4.2	131.00	-0.7	540,721	-23.0
Whitley	4,985	146.09	163.23	127.92	-6.0	141.08	-5.8	637,716	-22.2
Not Classified	42,416	214.38	284.47	180.88	-0.6	234.49	13.4	7,672,114	-10.5

UNITED STATES BUSINESS INDICATORS
Quarterly Data

	Seasonally Adjusted Annual Rates (\$ billions)			Percentage Change at Annual Rates		
	1975 3rd Qtr	1975 2nd Qtr	1974 3rd Qtr	1975 3rd Qtr	1975 2nd Qtr	1974 3rd Qtr
Gross national product (GNP)	1,503.6	1,440.9	1,416.3	18.6	7.0	9.7
GNP (\$ 1958)	808.3	783.6	823.1	13.2	1.9	-1.9
GNP potential level (\$=1958)	925.5	916.5	889.9	4.0	4.0	4.0
Government purchases	343.5	338.1	312.3	6.5	8.1	10.8
Personal consumption expenditures	968.8	938.6	901.3	13.5	11.6	15.7
Private domestic investment	179.1	148.1	205.8	113.9	-32.0	-10.9
Corporate profits before tax	134.1	113.3	157.0	96.2	57.1	62.8
Business inventories	264.4	265.5	253.6	-1.7	-6.4	25.8
Federal surplus—deficit (NIA)	-67.1	-103.3	-1.9	—	—	—

Monthly Data

	Current Levels or Annual Rates			Percentage Change at Annual Rates		
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index†	Oct. 164.4	163.4	152.8	Oct. 8.1	5.7	11.3
Consumer price index—food†	Oct. 179.9	177.6	166.9	Oct. 16.7	1.4	16.4
Wholesale price index†	Oct. 180.4	177.2	171.6	Oct. 23.5	7.9	41.0
Money supply (\$ billions)	Oct. 294.0	294.7	281.6	Oct. -2.8	2.1	3.9
Money supply plus time deposits	Oct. 658.5	656.3	607.6	Oct. 4.1	4.9	8.7
Mobile home shipments (thousands)	Sept. 215.0	235.0	258.0	Sept. -65.6	68.5	-91.2
Mortgages—outstanding (\$ billions)‡	Sept. 270.6	267.7	247.6	Sept. 13.6	15.8	4.5
Mortgages—new issues (\$ billions)‡	Sept. 66.7	68.8	32.1	—	—	—
Mortgage rate—new homes	Oct. 9.0	8.9	9.2	—	—	—
Prime rate business loans	Oct. 8.0	7.9	11.7	—	—	—

†Base period, 1967 = 100

‡All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Oct. 1975	Sept. 1975	Oct. 1974	INDIANA	Oct. 1975	Sept. 1975	Oct. 1974
Manufacturing	94.0	95.1	121.4	Manufacturing	86.8	76.6	88.8
Food	95.0	94.7	94.6	Food	83.0	91.6	100.8
Apparel and textiles	94.5	93.5	92.2	Apparel and textiles	90.9	84.8	90.5
Lumber and wood	94.5	94.0	98.9	Lumber and wood	84.6	81.7	102.6
Furniture	98.4	98.1	109.0	Furniture	102.5	99.4	92.4
Paper	95.0	94.1	100.6	Paper	90.6	88.8	100.8
Printing	98.8	98.9	104.2	Printing	92.6	92.2	109.2
Chemicals	100.4	100.3	106.4	Chemicals	99.8	101.5	83.4
Petroleum and coal	106.3	106.7	105.8	Petroleum and coal	71.9	73.1	116.2
Rubber	115.3	114.0	131.7	Rubber	98.9	100.9	97.9
Stone, clay, and glass	96.7	96.2	107.4	Stone, clay, and glass	94.3	96.3	105.4
Primary metals	86.1	86.6	104.2	Primary metals	86.4	87.9	114.2
Fabricated metals	96.1	96.3	107.0	Fabricated metals	105.0	102.6	115.2
Nonelectrical machinery	98.9	99.1	113.2	Nonelectrical machinery	91.3	93.6	105.8
Electrical machinery	89.7	89.0	101.1	Electrical machinery	87.2	88.9	100.7
Transport equipment	83.1	84.9	90.9	Transport equipment	84.7	86.4	99.8

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Sept. 1975	Aug. 1975	Sept. 1974
ANDERSON			
BD*	162.0	160.2	155.3
CUC†	396.9	446.5	179.6
IES‡	140.3	131.2	141.4
BEDFORD			
CUC	310.2	339.2	202.2
IES	141.1	130.3	123.6
BLOOMINGTON			
BD	330.0	259.3	345.6
CUC	439.3	410.2	319.5
IES	99.7	91.8	94.9
COLUMBUS			
BD	363.6	322.0	204.5
CUC	331.6	375.1	96.4
IES	159.6	149.5	145.7
CONNERSVILLE			
BD	204.4	186.5	200.0
CUC	247.2	263.6	167.7
IES	142.8	109.5	154.0
CRAWFORDSVILLE			
BD	287.0	242.9	244.3
CUC	897.6	1,208.4	248.8
IES	149.6	164.4	162.0
EAST CHICAGO			
BD	212.3	215.8	225.4
CUC§	499.5	419.5	119.2
IES	86.9	82.0	105.1
ELKHART			
BD	244.7	227.0	226.0
CUC	404.4	447.4	321.2
IES	145.4	143.0	150.0
EVANSVILLE			
BD	204.6	186.3	197.1
CUC	280.0	281.7	105.3
IES	125.8	124.5	133.8

INDIANA IN PERSPECTIVE

Comparative Compensation Data: 1974

	United States	Indiana	Rank in Nation
Average weekly earnings of manufacturing production workers	\$ 182.86	\$ 212.45	4
Average monthly salary—state employee:			
Highways	860.00	682.00	
Public welfare	781.00	771.00	
Hospitals	753.00	649.00	
Health	950.00	1,071.00	
Police protection	1,020.00	988.00	
Education	1,128.00	907.00	
All functions, excluding education	853.00	737.00	39
Monthly per capita cost of noneducational state employees	7.04	3.81	50
Full time equivalent noneducational state employee per 1,000 residents	8.22	5.16	50
Per capita personal income	5,448.00	5,184.00	28

SOURCE: Indiana Employment Security Division, *Trends*, July 1975, and U. S. Department of Commerce, *Survey of Current Business*, August 1975.

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Sept. 1975	Aug. 1975	Sept. 1974	REPORTING CITIES	Sept. 1975	Aug. 1975
MISHAWAKA				SOUTH BEND		
BD*	133.6	114.6	251.3	BD	237.0	188.6
IES‡	131.1	130.5	114.4	CUC	368.5	372.4
MUNCIE				IES	105.3	101.3
BD	291.3	254.7	217.1	TERRE HAUTE		
CUC†	232.5	293.2	114.3	BD	283.2	240.5
IES	112.8	92.8	122.2	CUC	316.6	316.4
NEW ALBANY				IES	157.7	152.1
BD	409.5	378.6	393.5	VALPARAISO		
CUC	1,000.6	612.8	394.3	CUC	395.5	370.4
IES	99.2	96.6	103.5	IES	154.3	177.5
NEW CASTLE				VINCENNES		
BD	264.8	235.9	242.2	BD	249.1	230.9
CUC	301.2	378.6	125.7	CUC	247.4	230.5
IES	143.0	139.2	151.7	IES	117.1	109.3
PERU				WABASH		
BD	294.3	189.8	272.7	BD	230.0	175.1
CUC	316.3	392.5	112.3	CUC	359.0	343.5
IES	178.0	169.4	160.2	IES	154.2	129.8
RICHMOND						
BD	197.9	165.9	173.5			
CUC	627.8	580.1	296.3			
IES	197.1	188.7	162.0			
SEYMOUR						
BD	321.4	310.1	290.1			
CUC	263.2	287.9	92.8			
IES	98.8	93.8	121.7			

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

ENTERED AS SECOND CLASS MAIL
AT THE BLOOMINGTON, INDIANA, POST OFFICE

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales
§ Continued Unemployment Claims of
East Chicago and Hammond are combined

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INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Sept. 1975	Aug. 1975	Sept. 1974
MISHAWAKA			
BD*	133.6	114.6	251.3
IES‡	131.1	130.5	114.4
MUNCIE			
BD	291.3	254.7	217.1
CUC†	232.5	293.2	114.3
IES	112.8	92.8	122.2
NEW ALBANY			
BD	409.5	378.6	393.5
CUC	1,000.6	612.8	394.3
IES	99.2	96.6	103.5
NEW CASTLE			
BD	264.8	235.9	242.2
CUC	301.2	378.6	125.7
IES	143.0	139.2	151.7
PERU			
BD	294.3	189.8	272.7
CUC	316.3	392.5	112.3
IES	178.0	169.4	160.2
RICHMOND			
BD	197.9	165.9	173.5
CUC	627.8	580.1	296.3
IES	197.1	188.7	162.0
SEYMOUR			
BD	321.4	310.1	290.1
CUC	263.2	287.9	92.8
IES	98.8	93.8	121.7

REPORTING CITIES	Sept. 1975	Aug. 1975
SOUTH BEND		
BD	237.0	188.6
CUC	368.5	372.4
IES	105.3	101.3
TERRE HAUTE		
BD	283.2	240.5
CUC	316.6	316.4
IES	157.7	152.1
VALPARAISO		
CUC	395.5	370.4
IES	154.3	177.5
VINCENNES		
BD	249.1	230.9
CUC	247.4	230.5
IES	117.1	109.3
WABASH		
BD	230.0	175.1
CUC	359.0	343.5
IES	154.2	129.8

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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Indiana Business Review

Underemployment of College Graduates 1

Robert M. Greenberg and Richard B. Tully

What Is Quality Education? 7

John E. Peck, John P. Mefford and Morcos F. Massoud

Recent State and National Employment Trends 11

Robert J. Kirk

Aristocrats of the Forest 17

Jerry A. SESCO

Evaluating Indiana's Efforts to Aid the Needy 19

Wayne Bartholomew

Languages and International Trade 23

Patrice Gouvernayre and Guy Lauvergeon

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Underemployment of College Graduates

BERT M. GREENBERG AND RICHARD B. TULLY

Both authors are associated with the Indiana Commission for Higher Education, Greenberg as project director of Manpower, and Tully as a research associate.

The Indiana Commission for Higher Education, supported by a grant from the Lilly Endowment, is engaged in a college-level manpower study for the state of Indiana. In the summer of 1975 the commission conducted an interview survey of a sample of Indiana companies employing 100 or more persons. The primary purpose of the survey was to assess the employability of college graduates in the private sector.

The survey sample was drawn from four of Indiana's Planning and Development Regions which contain 55% of the 1980 projected employment in Indiana.¹ The sample was stratified so as to represent a higher percentage of the largest companies in these regions. In all, 17 interviews were conducted, representing 18 of the total number of companies initially requested to participate in the study. Table 1 shows the number of companies in the surveyed regions, the sample size, and respondents.

The interviews were conducted by four college students, each of whom participated in an intensive two day training period. Each interviewer conducted approximately seventy interviews with top-level personnel administrators over a two month period of time. The identification of sample members and individuals to be interviewed was carried out by the project director from Indianapolis. The inter-

views lasted approximately one hour and covered a wide range of topics involving the employability of college graduates in business and industry. This report is based upon the findings of the survey.

SUMMARY OF FINDINGS

Employers surveyed did not generally support the idea that a person should accept a job in which he would be underemployed. However, many employers preferred to hire persons with more than the minimum educational requirements for a position. It was generally indicated that this hiring above requirements was related to the promotion potential identified with the job and the person. Most employers were rarely or never willing to pay more to a college graduate for doing the same type of work as a high school graduate, but educational background was generally an important factor in promotional considerations. The employers appeared to view the potential for promotion as a major determinant in whether or not a person should be deemed underemployed.

VIEWS ON UNDEREMPLOYMENT

Current projections of the Bureau of Labor Statistics indicate that the country has entered, or will soon enter, a situation in which there are more college graduates than positions available

¹ *Indiana's Interim Manpower Projections 1971-1980* (Indianapolis, Indiana: Indiana Employment Security Division, 1974). (Statewide report and reports for Regions 1, 3, 8 and 13.)

TABLE 1

Number of Companies in Regions, Sample and Respondents

	Total Companies	Sample	Respondents	% of Sam Respondi
Region				
Region 1	254	149	67	45.0
Region 3	217	118	68	57.6
Region 8	461	110	71	64.5
Region 13	144	98	68	69.4
Total	1,076	475	274	57.7
Size				
100-249 employees	695	180	81	45.0
250-499 employees	209	145	78	53.8
500-999 employees	111	89	66	74.2
1,000+ employees	61	61	49	80.3

which are generally considered appropriate for a college educated person.² The bureau claims that graduates will not be unemployed in great numbers, but many will face situations of underemployment.

Employers' views toward underemployment are not yet widely known. The interview respondents were asked whether they thought a person should start out in a job where he or she was underemployed in order to demonstrate promotability. The term *underemployed* was defined as "working at levels below what education and/or experience would indicate." Table 2 presents the responses to this question.

2. U. S. Department of Labor, Bureau of Labor Statistics, *Occupational Manpower and Training Needs*, Bulletin 1824 (Washington, D. C.: U. S. Government Printing Office, 1974).

Two-thirds of the respondents believed it was not a good idea to accept a position of underemployment. They indicated with overwhelming frequency that such a situation led to the individual becoming bored, frustrated, discontented, unchallenged, or losing interest. Some indicated hesitance to see a person underutilized while others commented that underemployment could be demeaning or degrading to the individual.

One-third of the respondents thought an individual should accept a position of underemployment in order to demonstrate promotability. This view was most commonly held in the smallest companies, where an individual, working hard, might have the most opportunity to attract the attention of those who could influence promotion.

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TABLE 2

Desirability of Starting at an Underemployed Position
(by size of company)

	Size of Company									
	100-249		250-499		500-999		1,000+		Total	
	n	%	n	%	n	%	n	%	n	%
Should accept underemployment	34	44.2	27	35.1	10	16.7	15	33.3	86	33.2
Should not accept underemployment	43	55.8	50	64.9	50	83.3	30	66.7	173	66.8

TABLE 3

Percent of New Employees Who Are Underemployed
Annually, by type of company)

Percent underemployed	Manufacturing		Nonmanufacturing		Total	
	n	%	n	%	n	%
0-10 percent	149	81.4	53	75.7	202	79.8
11-25 percent	19	10.4	7	10.0	26	10.3
26-50 percent	6	3.3	6	8.6	12	4.7
51-75 percent	5	2.7	1	1.4	6	2.4
76-100 percent	4	2.2	3	4.3	7	2.8

Many who recommended that an individual accept a position of underemployment noted that it would provide him with background and experience, and that it would give him the opportunity to learn about the company and its operations. Some indicated that, regardless of position, good workers are noticed. Others commented that in times of a tight job market, it is of value just to get one's foot in the door.

employment to range from 11-25% of new hires. Few companies placed their estimate higher than 25%. A number of respondents were hesitant to answer this question or said they simply had no idea as to the number of underemployed personnel with their company.

DESIRED EDUCATION

NUMBER UNDEREMPLOYED

Respondents were asked to estimate the annual percentage of new employees who were in a situation of underemployment in their companies. As Table 3 shows, 80% estimated that annually 10% or fewer of their company's newly hired persons were in underemployed situations. An additional 10% estimated under-

The respondents were asked which of four educational backgrounds—high school diploma, some college/no degree, associate degree, bachelor's degree—would be *most desirable* for a position which *required* no more than a high school diploma, assuming that all would work for the same salary. Table 4 gives the responses to this question.

Nearly half of the respondents indicated that they would prefer a person with no more

TABLE 4

Desired Educational Background for a Position Requiring Only a High School Diploma
(by size of company)

<i>Educational Background</i>	<i>Size of Company</i>									
	<i>100-249</i>		<i>250-499</i>		<i>500-999</i>		<i>1,000+</i>		<i>Total</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	
High school diploma	32	42.7	32	45.1	34	54.0	21	45.7	119	
Some college, no degree	19	25.3	23	32.4	17	27.0	13	28.3	72	
Associate degree	13	17.3	8	11.3	7	11.1	5	10.0	33	
Bachelor's degree	11	14.7	8	11.3	5	7.9	7	15.2	31	

than a high school diploma for a job requiring the diploma. Many indicated that such a person would be the most satisfied in that type of position. They felt that the high school graduate would be challenged, and because he would be happier in the position the company would experience less turnover. A number of respondents qualified this answer by indicating that the high school diploma would be most preferable only if there was little opportunity for promotion from the position.

Twenty-eight percent of the respondents indicated that the most desirable educational level for a position requiring a high school diploma would be some college but no degree completed. Many felt that the person who had this background would be better educated than the high school graduate, but not underemployed. A number of respondents stated that such a person, in beginning a college education, had shown ambition or motivation which might indicate that he or she would be a good employee.

Thirteen percent considered the associate degree to be the best background for a position requiring a high school diploma. The primary reason for choosing this background was the belief that this person would be more promotable than the high school graduate, without being overeducated for the position. Promotability also was the major concern of the 12% who indicated that they would prefer a bachelor's degree recipient for a position requiring a high

school diploma. Some felt that completing the bachelor's degree indicated learning capabilities which could make a person more productive than an individual with less formal education.

It was hypothesized that the size of company might strongly influence responses to this question. This was not the case, how

VALUE OF MASTER'S DEGREE

Participants were then asked whether they would prefer to hire a master's degree recipient or a bachelor's degree recipient (or whether the degree would make no difference) for an opening requiring a bachelor's degree. The responses are reported in Table 5.

Forty-three percent indicated that at this level the degree would not make a difference. The most frequent comment was that they would evaluate the individual's qualifications without concern for the degree, as long as the requirements of a bachelor's was met. The six percent of the respondents stated that they would show preference to the bachelor's degree recipient in this situation. It was generally agreed by these people that the individual with the higher degree would not be satisfied in a position. The 21% who chose the master's degree recipient generally felt such a person would be more promotable or a more productive employee.

TABLE 5

Preference for Bachelor's or Master's Degree Recipient
for Job Requiring Bachelor's Degree (by size of company)

Preference	Size of Company									
	100-249		250-499		500-999		1,000+		Total	
	n	%	n	%	n	%	n	%	n	%
Bachelor's	22	27.8	28	36.8	27	41.5	21	42.8	98	36.4
No difference	39	49.4	32	42.1	27	41.5	17	34.7	115	42.8
Master's	18	22.8	16	21.1	11	16.9	11	22.4	56	20.8

DO YOU PAY FOR DEGREE HOLDER?

Although in many cases employers appeared to prefer hiring individuals with higher than minimum educational requirements to do a job, it is not known how willing they were to pay higher salaries to college graduates than to high school graduates. The interviewees were asked how frequently they were willing to pay more to a college graduate for doing the same type of work as a high school graduate. Table 6 shows responses to this question.

Thirteen percent of the respondents indicated that they *always* or *often* were willing to pay more to a college graduate for doing the same type of work as a high school graduate. Twenty-six percent said they were *sometimes* willing to do so, and 61% said that they *rarely* or *never* did so. A number of respondents indicated that they believed such a procedure

would be illegal in that it would be a form of discrimination. Union contracts also were indicated as influencing many answers, since they limit salary flexibility.

The implication of this response is that though many employers may prefer to hire beyond the minimum educational requirement for a position, they are not usually willing or able to pay extra for better educated people. The college degree does not insure a higher salary for an individual unless the degree recipient is able to obtain a job at a level of duty or responsibility which calls for his educational background. College graduates who, for one reason or another, are induced to accept positions considered below that which their education would indicate, do not usually receive higher salaries than those with lower educational attainment.

TABLE 6

Willingness to Pay More to a College Graduate
(by size of company)

Percent of Willingness	Size of Company									
	100-249		250-499		500-999		1,000+		Total	
	n	%	n	%	n	%	n	%	n	%
Always	3	3.8	1	1.3	1	1.5	5	10.4	10	3.7
Often	9	11.4	9	11.8	4	6.1	3	6.3	25	9.3
Sometimes	18	22.8	25	32.9	19	28.8	8	16.7	70	26.0
Rarely	26	32.9	18	23.7	25	37.9	12	25.0	81	30.1
Never	23	29.1	23	30.3	17	25.8	20	41.7	83	30.9

TABLE 7

Consideration of Educational Background for Promotion
(by size of company)

	Size of Company								
Frequency Considered	100-249		250-499		500-999		1,000+		Total n
	n	%	n	%	n	%	n	%	
Always	30	37.5	34	44.2	35	53.8	28	57.1	127
Often	18	22.5	25	32.5	19	29.2	10	20.4	72
Sometimes	18	22.5	7	9.1	7	10.8	7	14.3	39
Rarely	8	10.0	9	11.7	3	4.6	3	6.1	23
Never	6	7.5	2	2.6	1	1.5	1	2.0	10

EDUCATION AND PROMOTION

The entire issue of underemployment involves a great deal of subjectivity. The survey respondents were generally opposed to underemployment and would recommend that an individual not accept such a position, viewing it as bad for the person and bad for the hiring company. However, though the respondents agreed with the definition of underemployment presented to them, they differed in its interpretation.

These differences sometimes involved the organizational structure of the company. For example, if the lines of promotion were virtually closed beyond a certain point, then a person accepting underemployment might find no opportunity to advance and would either bear a frustrating situation or soon leave the company. On the other hand, if promotion was a possibility, there was more tendency to recommend underemployment as a means of learning about the company and proving oneself to be a competent employee. Underemployment, then, is viewed not only as the relationship between a job and education or experience, but also takes into account the period of time it is expected that the individual will hold that job before the opportunity for promotion arises.

This factor of promotability appears to have a major influence on the hiring preferences of employers, as depicted in Table 4 and Table 5, and explains what might otherwise be viewed as a discrepancy in the respondents' preferences.

Though two-thirds of them appear to be against the principle of underemployment, more than half of them prefer a person with at least a postsecondary level education for a job requiring a high school diploma, and only about one-third distinctly prefer a person with more than a bachelor's degree for a job at that level as a minimum requirement. Underemployment is a concern of the respondents, where promotion might be a factor many of them prefer, or at least are open to consider equally, a person with a higher level of educational attainment.

Promotability, then, is viewed as a dominant factor in considering whether or not a person is underemployed. The relationship between promotion and education was also discussed in the survey. Respondents were asked how frequently an employee's educational background is taken into account when he is considered for promotion to managerial or professional level of occupation. Their responses are presented in Table 7.

Nearly half of the respondents indicated that they always consider the educational background of an individual when considering him for promotion to a professional or managerial level position; an additional 27% stated that this was often a consideration. When asked to estimate the importance of educational background in promotional consideration, 23% indicated that, when educational background is taken into account, it was a very important

or. Sixty-one percent stated that it was an important factor while only 16% considered it a minor factor.

Based upon these responses, it would appear educational background is generally considered an important factor in promotion to professional or managerial positions. This supports the view that, though an individual with a college education may start out in a position which does not require a college degree, he is more likely to be considered for promotion to a higher position within a reasonable period of time.

Instead of immediately occupying positions of professional or managerial natures, many college graduates may have to experience a period of time in which they will consider themselves underemployed, but as they learn about the company and prove themselves on the job, they can anticipate advancement. As a result, assessment of underemployment and follow-up studies of graduates might be more meaningful if undertaken a full year or two after an individual has left a postsecondary institution.

What Is Quality Education?

JOHN E. PECK, JOHN P. MEFFORD AND MORCOS F. MASSOUD

John E. Peck and John P. Mefford are both faculty members at Indiana University, South Bend. Peck is an associate professor of economics and Mefford is an assistant professor of education. Morcos F. Massoud is an associate professor of business administration at Northeastern University in Boston.

In 1970, a report was submitted to the Indiana Commission on State Tax and Financing Policy which contained the conclusions and recommendations of a year-long study of public school financing in Indiana.¹ The report called for the full-state funding of Indiana's schools to be financed through the state revenue system; specifically, with graduated net income taxes on personal and business income.²

In the discussion that followed the issuance of this report in the Indiana legislature, two issues surfaced that have never been completely resolved. One issue was the question of control: that is, the assignment of program and budgetary responsibility. If the financial responsibility for the schools is transferred from local to state

government, at what level does the control of the program and the budget reside? (The idea of local autonomy has long been cherished in the American educational system.) The second issue, that of *accountability*, is a related one: If the state is to provide full funding, how can it be assured that the quality of educational output will reflect dollars spent?

CONTROL

In an attempt to shed some light on the question of control, the nation's state departments of education were surveyed. The purpose

1. John E. Peck, *Financing of the Public Elementary and Secondary Schools in Indiana*, Indiana Commission on State Tax and Financing Policy, Indianapolis, 1970.

2. In the 1969-70 school year, school receipts by source were as follows: federal, 6.8%; state, 39.4%; and local, 53.8%.

of the survey was to get an uncomplicated picture of the structure of state control as it presently exists—to determine what is controlled and in what manner the control is carried out.

The survey showed no definitive national pattern for the structure of school control. Some states, for example, Iowa, New Hampshire, Kentucky and Indiana, place a relatively large number of controls on the functions of local school systems. In other states such as Massachusetts, Missouri and Wisconsin, state government is less involved with the administration of school finances and programs. In these cases, differing degrees of local autonomy were found.

There were also differences within control categories. For example, New York limits school tax rates but does not control curricula; while in South Carolina, state officials approve curricula but do not limit tax rates or control budgets. Illinois initiates school expenditures for capital improvements, whereas Texas and five other states exercise no direct control over capital expenditures at all.

The survey results highlighted the diversity found in the structure of state control. As a result, one cannot properly generalize about the presence or absence of local autonomy in school finance today.

ACCOUNTABILITY

The question of accountability—the accounting of performance—is more basic than that of control, since it assumes an ability to identify and measure the product of the educational system. At the same time, the abundant literature dealing with quality education and accountability is far from definitive in the sense that there is no consensus on how to measure the quality of education and who is to be held accountable.

The authors have recently initiated a research project that is intended to shed some light on these questions. The first phase of the study is an opinion survey of a sample popula-

tion in Indiana which attempts to find areas of agreement and disagreement on measures of quality education among parents, students, educators and state legislators. It was hypothesized that these groups would hold different conceptions of quality education. Later phases of the research will involve the integration of initial findings and the findings of others in the field; quantification of measures of quality education; expansion of the sample; and final evaluation of school systems in Indiana and the nation.

The specific populations sampled in the phase of the study were as follows:

61 members of the 1973-74 Indiana General Assembly

277 high school social studies students of Penn High School, Mishawaka, Indiana

120 educators (elementary, secondary and special education teachers and administrators) of Penn-Harris-Madison School Corporation

57 parents, Penn-Harris-Madison School Corporation.

These four groups completed identical questionnaires which asked for their opinions on the merit of fourteen possible indicators of quality education. Each possible indicator was marked as either a major indicator, an indicator, not an indicator or don't know. The indicators-listed were intended to suggest economic, educational proficiency, employment and affective factors. The responses of the various groups were then weighted so that a weighted average could be computed for each of the responses of the four groups surveyed. Many differences in the responses were noted.

The differing responses were then subjected to statistical analysis to determine if the differences were statistically significant. This technique is employed to help the researcher distinguish real differences in opinion from differences that might be explained by the unintentional selection of a skewed sample. Forty-four of the various eighty-eight possible pair-offs of opinions (parents-students, parents-teachers, students-legislators, and so on) on the fourteen possible indicators proved to be statistically significant at the .05 level or better.

Results of Quality Education Survey

Possible Indicators	Percent of Respondents Marking "Indicator" and "Major Indicator"				Significant Differences
	Parents	Students	Teachers	Legislators	
Amount of school expenditure per student	50.8	68.6	88.3	60.5	P/S, P/T, S/T, T/L
Student/teacher ratio (class size)	77.2	87.4	99.2	85.3	All combinations
High school grade point average	49.1	61.3	59.2	57.4	P/S, P/T
Performance on achievement tests (SAT's)	63.2	56.0	63.4	85.2	P/L, S/L, T/L
Desire to continue learning	100.0	86.2	95.9	88.5	P/S, S/T
Acceptance for admission to a college or university	77.2	66.4	58.3	82.0	P/T, S/T, T/L
Class ranking in college or university	86.0	56.6	51.6	81.9	P/S, P/T, S/T, S/L, T/L
Ability to get a job	87.7	65.0	78.4	78.7	P/S
Initial employment success	75.4	62.4	79.2	72.1	S/T
Future employment success	94.7	73.6	81.7	80.3	P/S
1 Student satisfaction with education received	87.7	85.5	95.0	82.0	P/L, S/L, T/L
2 Parent satisfaction with education received	96.4	61.8	89.2	68.8	P/S, P/T, S/T, T/L
3 Student satisfaction with his or her values and behavior	94.7	76.9	90.0	70.5	P/S, P/L, S/T, T/L
4 Parent satisfaction with student values and behavior	96.5	55.6	84.1	68.8	P/S, P/L, S/T, T/L

In this case, it can be concluded that there is a 99% probability that differences in the mean responses of the four groups questioned are explained by factors other than sampling error.

The accompanying table gives a breakdown of each indicator of the ranking of opinions among the four publics: parents, students, teachers and legislators. Significant differences between the groups are also noted where they exist, using S for students, P for parents, T for teachers, and L for legislators. The authors would be happy to provide interested parties with a complete percentage distribution of responses upon request.

ANALYSIS

Many conclusions can be drawn from the findings summarized in the table. Some that are of particular interest to the authors are the following.

If the indicators are categorized as *economic* (indicators 1, 2, 8, 9 and 10); *environmental* (2 and 3); *educational proficiency* (3 and 4); *achievement in higher education* (5, 6 and 7); *employment success* (8, 9 and 10); and those in the *affective domain* (5, 11, 12, 13 and 14), it seems that the environmental and affective factors are generally considered most important

by all four groups sampled. The educational proficiency and higher education factors ranked lowest.

Parents appear to be most concerned with student and parent satisfaction with education received, and student values and behavior.

Students are the least pragmatic of the four groups in that they gave least weight to success in college and the ability to get a job as measures of quality education.

The teachers sampled were most concerned with factors relating to parent and student satisfaction, as were the parents, but at the same time, teachers gave higher marks than the others to economic factors such as dollars spent per student and class size.

Indiana's legislators gave their highest rankings to the desire to continue learning and to class size. At the same time, 85% of those legislators considered performance on achievement tests to be an indicator of the quality of education received. This response is significantly higher than the responses of the other groups, which range from 56 to 63.4%. Apparently, an "accountability formula" giving heavy weight to SAT scores would be considered more valid by legislators than by parents, students and teachers.

As might be expected, the desire to continue learning is ranked highest as an indicator of quality education received. However, high school grade point average received the lowest rankings by the groups. This is an interesting result, because grading systems are often defended on the grounds that they can be correlated positively with future success—particularly success on the job.

All of the groups suggested that class size (the smaller the better) is an indicator of the

quality of education received. Only one of 120 teachers and eight of the sixty-one legislators responding felt that the student/teacher ratio was not an indicator. The economic implications associated with increasing personnel and classroom facility budgets are, of course, considerable.

Students and teachers are apparently not as convinced that acceptance for admission to college or university and class ranking of those accepted are as indicative of quality education as are parents and legislators convinced.

Finally, the low marks given the dollars spent per student by all but teachers is an interesting result. The authors feel that there is a prevailing attitude today to regard compulsory spending as a waste of money. The low mark given this indicator by teachers (88%) might reflect a frustration with limited financial resources more than an opinion that quality is served by larger and larger expenditure. More testing would be necessary, however, to test this possibility.

The indicators included in this partial survey are not necessarily the only possible indicators, nor are those receiving the highest ranking in fact valid indicators of quality of education received. The initial hypothesis, which was verified in the limited sample taken, was that perceptions would vary among different groups. If the findings are substantiated by broader sampling, the study's implications for achieving school accountability will be important. Accountability can be achieved only by determining whose interests need to be served or by reaching a consensus among all of the parties with interests in the educational process.

Recent State and National Employment Trends

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As Indiana emerges from the 1973-75 recession, three questions about employment changes during this period arise: To what extent did the rate of employment changes in Indianapolis and Indiana differ from national rates during the recession? To what extent did individual industrial sectors contribute to the differential between Indianapolis-Indiana employment and the national trend? How does the rate of employment change in Indianapolis compare with that of competing metropolitan areas?

The 1973-75 recession can be interpreted as having two stages. The first stage, from November 1973, to September 1974, was induced by factors affecting supply such as the oil embargo, adverse weather conditions, depreciation of the dollar which raised production costs of commodities using higher dollar-priced imports, and recently enacted environmental and safety laws. The second stage, from September 1974, to April 1975, was induced by changes in demand (a decline in total spending), to which firms responded by inventory decumulation and employment lay-offs.

Employment change during the recession is measured by index numbers. The index number for each employment category equals 100 in

November 1973, the peak in national industrial production. To reduce the effect of seasonal factors, quarterly averages are used. The quarters are defined relative to the business cycle peak rather than the calendar year. Thus, the first quarter following the peak (November 1973) consists of the months December 1973, and January and February 1974, while the eighth quarter consists of September, October and November 1975—the most recent quarter for which data were available. (Complete U. S. data were not available for the eighth quarter.)

Figure 1 (total nonagricultural employment) shows the cyclical character of the Indianapolis and Indiana economies relative to the U. S. economy. Although Indianapolis and Indiana approached the peak from higher levels than the U. S., they contracted to lower levels at the trough (sixth quarter), therefore experiencing greater contraction (for Indiana, 5.9 percentage points; for Indianapolis, 4.1; and for the U. S., 3.9) than nationwide.

In Figure 2 (manufacturing employment), the two stages of the recession are clearly evident—the supply-induced first stage during the first through third quarters, followed by the demand-induced second stage during the fourth

FIGURE 1 Total Nonagricultural Employment (Nov. 1973 = 100)

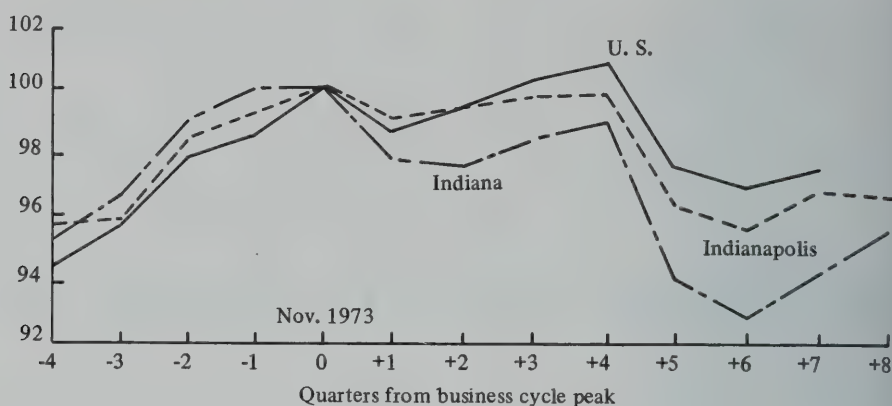
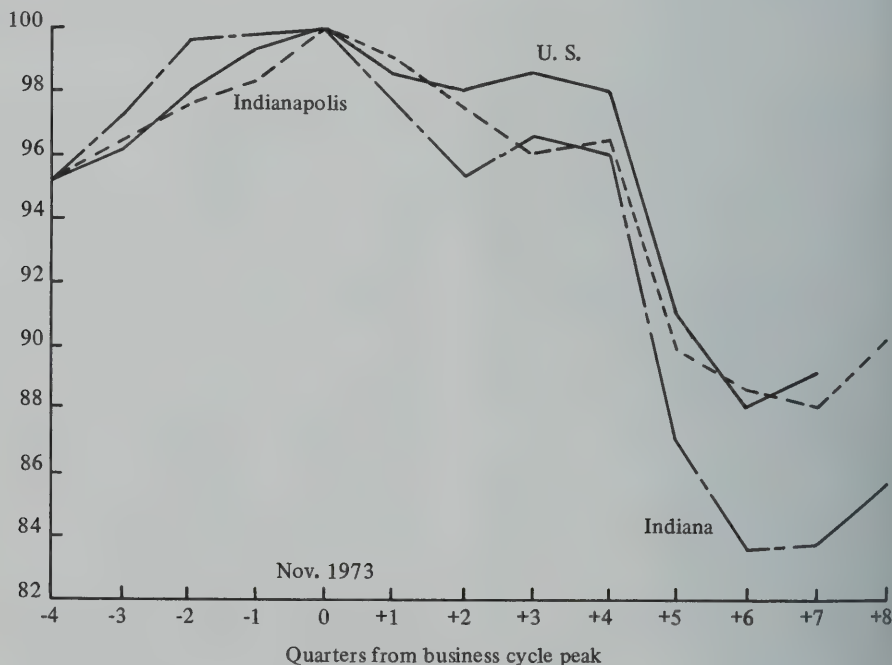


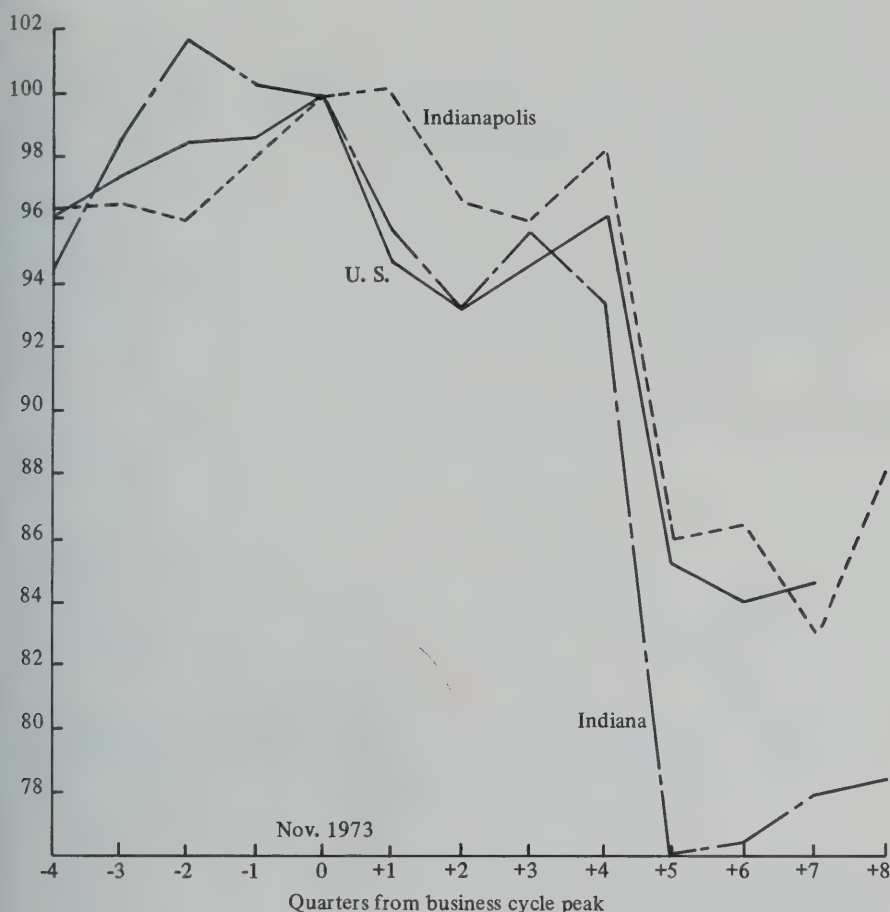
FIGURE 2 Manufacturing Employment (Nov. 1973 = 100)



through sixth quarters. Indianapolis appears to lag Indiana and the nation by one quarter at the second peak (fourth quarter) and at the trough (seventh quarter). The amplitudes of contraction for manufacturing are: Indiana, 13.5 percentage points; Indianapolis, 8.7; and the U. S., 10.8. Indianapolis manufacturing did not contract as much as did U. S. manufacturing.

Figure 3 shows the performance of a component of manufacturing in Indiana Indianapolis—transportation equipment. In Indianapolis, employment held up better and not contract as much as Indiana did, although both contracted more than the U. S. Indiana, 17.6 percentage points; for Indianapolis, 15.3; and for the U. S., 11.9).

FIGURE 3 Transportation Equipment Employment (Nov. 1973 = 100)



In Figure 4 (nonmanufacturing), Indiana and Indianapolis have performed below the U. S. in part to the more severe contractions in manufacturing experienced by Indiana. The extent of the contraction during the fourth quarter was greater for Indiana and Indianapolis than for the U. S., and the gap widened somewhat during the second stage of the recession.

Selected nonmanufacturing sectors are shown in Figures 5 through 7. In Figure 5 (wholesale and retail trade), neither Indianapolis nor Indiana was able to expand from the initial supply-induced first stage as much as the U. S., and the differential has continued throughout the second stage. In Figure 6 (services), the supply-induced contraction is

minimal for each of the economies. However, Indianapolis and Indiana did not expand as much as the nation before the second stage. The contraction of the second stage was relatively mild and occurred in the fifth quarter. Indianapolis has shown relatively no expansion from the trough in contrast to Indiana and the U. S.

In Figure 7 (government), some seasonal factors can be observed. For example, the third and seventh quarters are the summer months of June, July and August, and the contractions observed in these quarters reflect in part the public school teachers on summer vacation. The large expansion in the seventh quarter for Indianapolis reflects in part the CETA summer youth program.

FIGURE 4 Nonmanufacturing Employment (Nov. 1973 = 100)

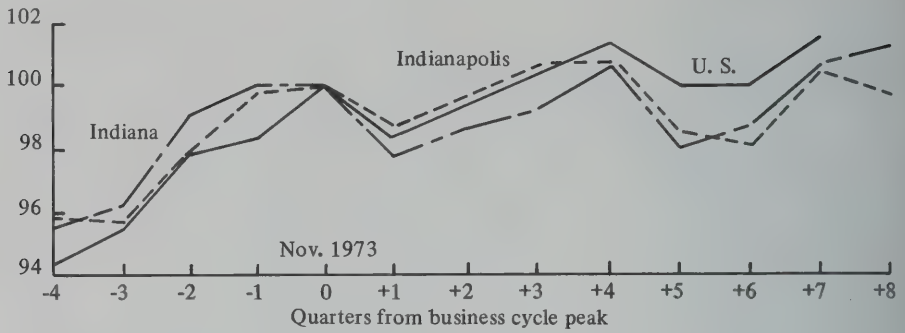


FIGURE 5 Wholesale and Retail Trade Employment (Nov. 1973 = 100)

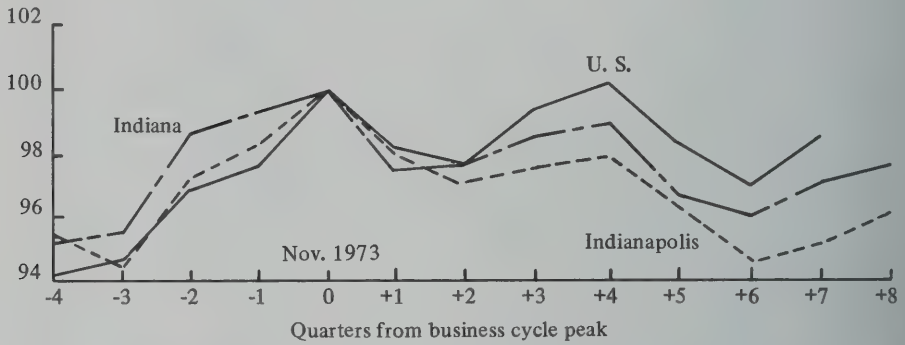


FIGURE 6 Services Employment (Nov. 1973 = 100)

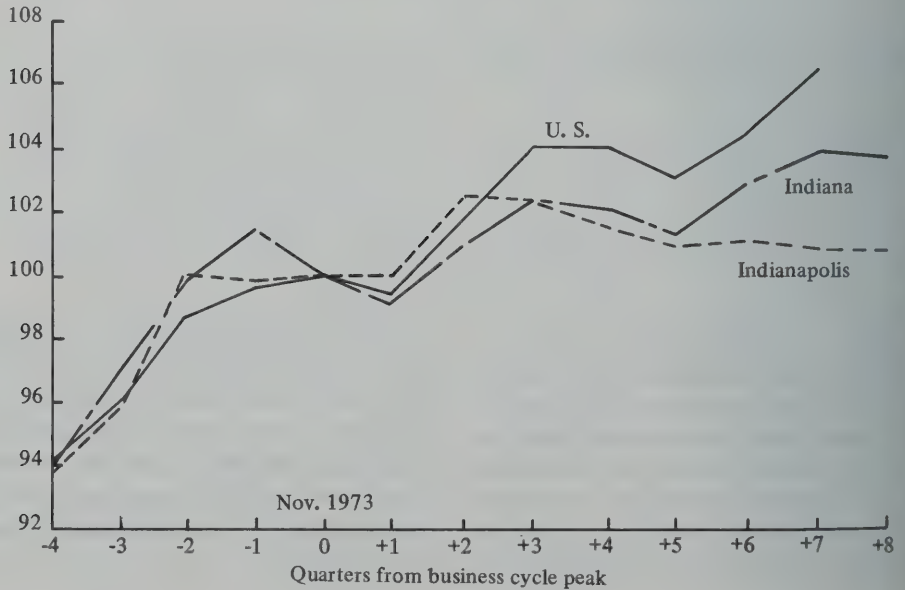
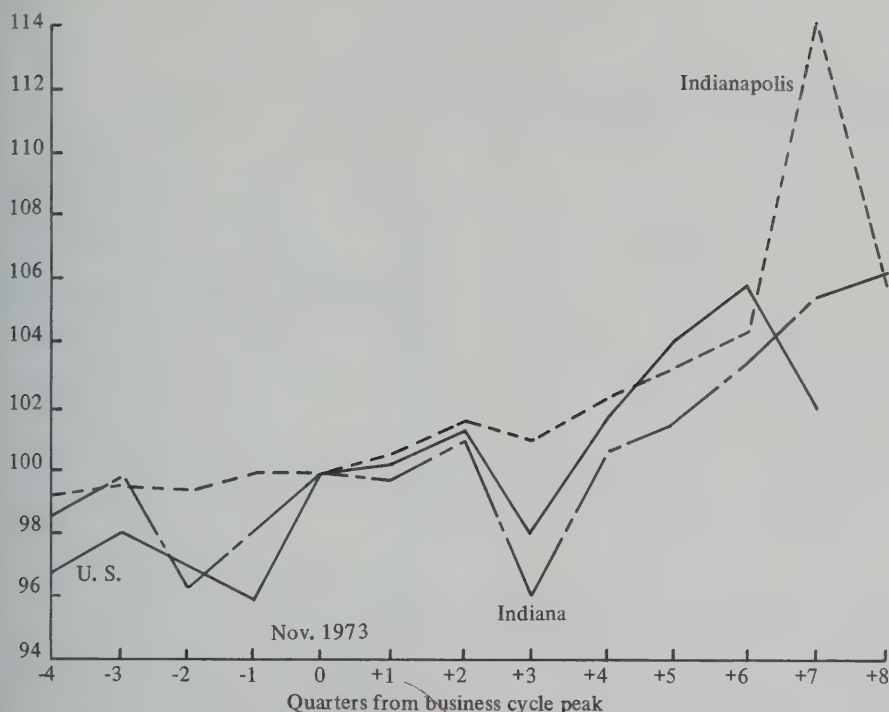


FIGURE 7 Government Employment (Nov. 1973 = 100)



SOURCES for Figures 1-7: For Indianapolis and Indiana: Indiana Employment Security Division, *Indiana Labor Market Letter* and *Indiana Labor Market Trends*. For the U. S.: U. S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*.

METROPOLITAN AREA COMPARISONS

How well did Indianapolis perform compared to those metropolitan areas with which it competes? The areas included in this analysis are Columbus, Cincinnati, Louisville and St. Louis. As production and income in the U. S. economy change, the impact of demand for different kinds of goods occurs differentially. For example, during recession the impact on durable goods is typically greater than on services, as observed in Figures 3 and 6. Since metropolitan areas differ in their industry composition, they are affected differentially by change in national aggregate demand. In addition, urban areas may experience differences in rates of change in employment because, for a given industry, one urban area may increase its share of national industry employment due to better management or better access to resources and markets.

Annual averages of employment for the years 1970 and 1974 were chosen for analysis because both of these years are the first years after a peak in the business cycle (November 1969, and November 1973 respectively). As indicated earlier, the first stage of the 1973-75 recession was supply-induced, and was followed in the second stage by a more conventional demand-induced contraction.

To compare metropolitan areas, column 3 of the accompanying table measures what employment would have been if employment in each industrial sector had changed at the national rate from 1970-74. The difference between actual and projected employment in 1974 is shown in column 4, and measures the extent to which employment change in the metropolitan area was due to faster or slower rates of change than the national rate in the individual sectors. Finally, in column 5 the

Total Nonagricultural Payroll Employment in Selected Metropolitan Areas
(Seasonally unadjusted annual averages, in thousands)

	1970 (1)	1974 (2)	Projected 1974* (3)	Difference Col. 2 - Col. 3 (4)	Actual as Percentage of Projected (5)
Cincinnati	507.1	544.3	556.4	-12.1	97.8
Columbus	377.3	459.3	418.4	40.9	109.8
Louisville	330.1	366.9	361.7	5.2	101.4
St. Louis	896.5	894.4	986.5	-92.1	90.7
Indianapolis	419.1	459.9	460.9	-1.0	99.8

*The projected 1974 employment is computed as follows:

$$E_i^{70} \frac{US_i^{74}}{US_i^{70}} \text{ where: } E_i^{70} = \text{annual average employment in 1970 for the } i\text{th industrial sector for the metropolitan area;}$$

$$US_i^{74} = \text{minimum annual average employment in 1974 for the } i\text{th industrial sector for the U. S.; and}$$

$$US_i^{70} = \text{annual average employment in 1970 for the } i\text{th industrial sector for the U. S.}$$

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, selected years, Table B-8.

actual as a percent of projected employment in 1974 is shown.

For total nonagricultural employment in Indianapolis, column 4 indicates that 1,000 more persons would have been employed if employment in each industrial sector had changed at the national rate from 1970-74. Column 5 indicates that Indianapolis achieved 99.8% of its projected employment. By using as a criterion the extent to which the area achieved its projected employment, the areas can be compared. Columbus had the strongest performance, achieving 109.8% of its projected employment. St. Louis had the weakest

(90.7%) with Louisville, Indianapolis and Cincinnati occupying intermediate positions.

Further analysis is required to explain the differential patterns of employment change. This article has focused on employment change over the business cycle. During the same period of time, the number of persons wishing to enter the labor force has been increasing due to the effects of the post World War II baby boom (1947-57), and the increasing labor force participation rates of females. As a consequence, this analysis needs to be combined with a labor supply analysis for a more complete picture of the performance of the Indianapolis and Indiana economies.

Aristocrats of the Forest

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Perhaps the most valuable tree species in the forests of Indiana is the American black walnut. Often called the aristocrat of American hardwoods, the walnut has become part of the nation's heritage. The earliest settlers used its wood for building cabins, fences and household implements, and its tasty nuts for food. Abraham Lincoln split many of his rails from walnut trees.

Today, black walnut is used chiefly for furniture and wall paneling, but it also goes into many other products such as gunstocks and hardware. Ground nutshells are used as an abrasive to polish impeller and rotor blades in jet engines and to smooth and finish automobile chrome.

Walnut wood is renowned for its superior machining and working qualities, its beautifully figured grain, its excellent durability and stability, and its ability to take and hold a fine finish. Present demand for black walnut is so high in both the United States and foreign countries that experts are worried about future supplies.

VOLUME AND PRODUCTION

The total volume of black walnut sawtimber is large enough to be cut into lumber or veneer on commercial forest land in the United

States is estimated at 2.5 billion board feet. This is only about one-half of 1% of all hardwood sawtimber volume in the United States. More than half of the black walnut timber is found in Indiana, Illinois, Iowa, Missouri, Ohio, Kansas, and Kentucky. In this seven-state region, walnut trees reach their optimum development and have their greatest commercial value.

The most recent forest inventory statistics rank Indiana fifth in the nation in net walnut sawtimber volume with 185 million board feet. But this is probably a conservative estimate because usable walnut trees that grow in open pastures and along fence rows and drainage areas are not usually included in the standard forest inventory. So, the total walnut volume may be greater than official surveys show. About 60% of Indiana's walnut sawtimber volume is in the southern half of the state.

It is estimated that one-third of the state's annual walnut timber harvest is in veneer logs, and the remainder is in sawlogs suitable for lumber manufacture. The bulk of the veneer log volume is made into face and commercial grade veneers by the state's veneer industry.

The increasing demand for walnut has led to overcutting of the large, high-quality trees. Most of the walnut sawtimber volume left is in

trees less than fifteen inches in diameter. This means, of course, higher production costs and lower quality veneers and lumber.

Price trends for walnut timber also reflect the increasing demand and short supply. The price of walnut timber has climbed to record heights as foreign and domestic buyers compete for supplies. For example, the average price per thousand board feet of walnut veneer logs purchased by U.S. veneer mills rose from \$660 in 1963 to \$1,314 in 1973. During this same period, the average price per thousand board feet of walnut veneer log exports rose from \$940 to \$1,676.

General market and economic conditions are the major price determining factors for walnut timber. However, certain local considerations such as accessibility, site and terrain, distance to market, size of sale, and tree size and quality also affect the price received. Generally, large trees suitable for veneer stock bring a higher price than those destined for lumber manufacture. Assuming an average price of \$800 per thousand board feet of walnut veneer logs and an average price of \$300 per thousand board feet of walnut sawlogs delivered to the mill, the value of the annual harvest of walnut timber in Indiana is about \$10 million.

BLACK WALNUT'S FUTURE

The immediate outlook for high quality walnut timber supplies is not good. The annual harvest of walnut timber in Indiana is four times greater than the net annual growth. The long-range outlook, however, is expected to improve as increased research and promotional efforts to encourage more intensive walnut management and culture are implemented.

In 1970, the Walnut Council was formed in Indianapolis, with the purpose of stimulating the production of enough walnut products to meet the demands of the public and the walnut industry. The council now consists of over 600 persons and organizations throughout the U.S. and several foreign countries interested in grow-

ing and manufacturing black walnut timber. The general objectives of the Walnut Council are to advance knowledge of walnut culture, encourage the planting of walnut, to encourage the management of established walnut, and perpetuate the utilization of all walnut products.

In addition to the Walnut Council, services of several public and private agencies are available to those interested in growing black walnut in Indiana. The Indiana Division of Forestry, the State Agricultural Experiment Station, State Extension Foresters, and private forestry consultants are all prepared to supply specific information on black walnut. On-ground assistance is available from service foresters of the Indiana Division of Forestry conveniently located throughout the state. Also, private consulting foresters in Indiana provide assistance on a fee basis.

Major promotional efforts relating to black walnut are carried on by the Fine Hardwoods/American Walnut Association which has headquarters in Chicago, and the United Hardwood Forestry Program in Columbia, Missouri.

Research on black walnut is being conducted by Forestry personnel at Purdue University in Lafayette, Indiana. The Indiana Division of Forestry is conducting black walnut research in cooperation with Purdue University and the Forest Service. In addition, the Indiana Division of Forestry is establishing seed orchards to provide a better growing walnut tree in the future. The wood industry of the state actively participates in research on black walnut. Major research efforts on black walnut which are applicable in Indiana, are also conducted by the United States Department of Agriculture Forest Service at Carbondale, Illinois. Here studies are underway on walnut planting, yield, quality, site characteristics, utilization, pest resistance, genetic improvement, irrigation, pruning, spacing and seed selection. All of these efforts are calculated to make black walnut's future in Indiana and the nation as bright as its past.

Evaluating Indiana's Efforts to Aid the Needy

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How does Indiana compare with its neighboring states and the nation in the amount of aid it provides to its needy citizens? To make this comparison, two measures of aid to the poor for the years 1965 through 1969, and 1970 through 1973 were examined: first, the Aid to Dependent Children program; and then, total public assistance expenditures, which includes Aid Age Assistance, Aid to Families with Dependent Children, Aid to the Blind, Aid to the Permanently and Totally Disabled, medical assistance for the aged, programs for intermediate care facilities and emergency assistance and General Assistance. Public assistance does not cover all of the programs designed to help the poor (for example, the food stamp program, housing allowances and other programs are not included), but it does provide a fairly comprehensive measure.

Some of the factors to be considered in determining the relative status of Indiana's programs to aid the needy are the following:

the annual average ADC payment per recipient
the percent increase in ADC recipients and

total ADC expenditures between 1965-1969 and 1970-73

the average ADC payments per recipient as a percentage of personal income per capita

total ADC payments as a percent of total personal income

total public assistance payments as a percent of total personal income

public assistance payments from state and local sources as a percent of total personal income

the number of ADC and welfare recipients as a percent of the number of poor people.

AID TO DEPENDENT CHILDREN

Indiana can be compared with the adjoining states and the national average in the amount of payments per year provided to each recipient of the ADC program. These figures were calculated by dividing the total ADC payments by the number of ADC recipients. The results of these calculations, contained in Table 1, show that the average annual ADC payment per

recipient in Indiana was below the national average and all of the surrounding states, with the exception of Kentucky, for both periods studied. In the 1965-69 period, Indiana's ADC payments per recipient averaged approximately \$80 less than the national average. During the 1970-73 period, the discrepancy between average annual ADC payments in Indiana and the U. S. average increased to \$136.

In terms of percentage increases in ADC payments per recipient between the two periods, Indiana's increase was about the same as Ohio's, larger than Kentucky's, but lower than Illinois, Michigan, or the U. S. average. It should also be kept in mind when evaluating Indiana's 25.3% increase in ADC payments that the Consumer Price Index increased by 22.6% between the 1965-69 period and the 1970-73 period. Thus, the real increase (the increase in the purchasing power of the ADC payments) was less than 3%.

There are three possible explanations for the failure of Indiana's ADC payments per recipient to increase as rapidly as the surrounding states (with the exception of Kentucky) or the national average. The first possibility is that the number of ADC recipients in Indiana increased at a relatively faster rate than in the other states. Second, there is the possibility that Indiana did not allow the total amount of ADC expenditures to increase as rapidly as the other states. The third possibility is a combination of the previous two. In order to separate out these effects, the percentage increase in ADC recipients and total ADC expenditures were examined.

Table 2 indicates that due to a larger percentage increase in the number of ADC recipients, Indiana's ADC payments per recipient did not increase as rapidly as most of the surrounding states and the U. S. average. In Indiana, the increase in the number of ADC recipients was higher, on a percentage basis, than in any of the surrounding states or the national average, while the percentage increase in total ADC payments in Indiana was not as great as Michigan, but was larger than the other surrounding states and the U. S. average. Thus,

TABLE 1

Aid to Dependent Children Payments per Recipient, 1965-69 and 1970-73

	1965-69 (\$)	1970-73 (\$)	Percentage Change
Indiana	370.08	463.86	25.3
Illinois	529.87	694.85	31.9
Kentucky	326.31	385.97	18.3
Michigan	487.85	736.55	51.0
Ohio	417.09	523.12	25.4
United States	450.13	600.42	33.3

SOURCE: Calculated from U. S. Department of Health, Education and Welfare, *Public Assistance Statistics*, and U. S. Department of Health, Education and Welfare, *Welfare in Review*.

TABLE 2

Percentage Change between 1965-69 and 1970-73 in the Number of ADC Recipients per Month and Average Total ADC Expenditures

	Number of ADC Recipients per Month (%)	Total Payments (%)
Indiana	+155.6	+226.0
Illinois	+111.3	+197.0
Kentucky	+ 48.0	+ 74.0
Michigan	+148.8	+282.0
Ohio	+ 85.9	+133.0
United States	+ 93.1	+156.0

SOURCE: See Table 1.

Indiana increased the number of ADC recipients at a faster rate than the surrounding states and the national average, and at the same time showed a very impressive relative increase in total ADC expenditures.

It is also important to view the ADC benefits in relation to the income levels of citizens of the states and the nation.

verse psychological effects of poverty are a function of low relative income levels and low absolute income levels. Table 3 shows that Indiana provided smaller ADC payments per recipient in relation to personal income per capita than any of the surrounding states or the U. S. average in both time periods. The last column of the table indicates that Indiana, the adjoining states (with the exception of Michigan), and the United States provided ADC payments per recipient that were a smaller proportion of personal income per capita in 1970-73 than in 1965-69. This relative decline in the economic status of ADC recipients was most pronounced in Kentucky, followed by Ohio, Indiana, Illinois and the national average.

By comparing the growth of total ADC payments with the growth in personal income, it can be determined what effort is being made at the various states, and the nation as a whole, to provide aid to the poor through ADC. Table 4 shows that Indiana provided a smaller proportion of its total personal income to poor people in the form of ADC payments than any of the surrounding states or the national average for both the 1965-69 period and the 1970-73 period. Even though Indiana's percentage increase between 1965-1969 and 1970-73 was larger than three of the four adjoining states, the absolute gap between Indiana and the national average and the adjoining states (except Kentucky) increased between the two time periods.

TOTAL PUBLIC ASSISTANCE

An examination of Indiana's efforts to provide aid to the poor through programs other than ADC also indicates that the state continued to rank behind neighboring states and the national average. This was determined by dividing total public assistance payments by total personal income. Table 5 shows that Indiana ranked last in total public assistance payments as a percent of total personal income. Indiana, the adjoining states and the national average all show that

TABLE 3

Average ADC Payments per Recipient as a Percent of Personal Income per Capita, 1965-69 and 1970-73

	1965-69 (%)	1970-73 (%)	Percent Change
Indiana	11.54	10.86	- 5.6
Illinois	14.17	13.77	- 2.8
Kentucky	13.24	10.98	-17.1
Michigan	13.68	15.37	-12.3
Ohio	12.54	11.76	- 6.2
United States	14.04	13.73	- 2.2

SOURCE: The ADC payments per recipient were taken from the sources cited in Table 1. Personal income was obtained from U. S. Bureau of the Census, *Statistical Abstract of the United States*.

TABLE 4

Total ADC Payments as a Percent of Total Personal Income, 1965-69 and 1970-73

	1965-69 (%)	1970-73 (%)	Percent Change
Indiana	.12	.27	125.0
Illinois	.35	.76	117.1
Kentucky	.40	.47	17.5
Michigan	.28	.76	171.4
Ohio	.25	.42	68.0
United States	.36	.64	77.8

SOURCE: See Table 3.

total public assistance payments were a larger percentage of total personal income in 1970-73 than in the earlier period. The percentage increase was greater for Michigan and Illinois than it was for Indiana, but Indiana's gain exceeded the gain by Ohio, Kentucky and the national average. Even with the larger gain, Indiana was still less than 50% of the national average and less than three-fourths of the lowest of the adjoining states.

TABLE 5

Total Public Assistance Payments as a Percent of Total Personal Income, 1965-69 and 1970-73

	1965-69 (%)	1970-73 (%)	Percent Change
Indiana	.54	.95	75.9
Illinois	1.02	1.87	83.3
Kentucky	1.65	1.79	8.5
Michigan	1.08	2.12	96.3
Ohio	.97	1.29	33.0
United States	1.35	2.06	52.6

SOURCE: Calculated from U. S. Department of Commerce, *Government Finances*, and U. S. Bureau of the Census, *Statistical Abstract of the United States*.

The analysis of data up to this point indicates that Indiana ranked behind the adjoining states and the national average during 1970-73 in the amount of relief given to the poor through both the ADC program and through public assistance. However, since part of these funds comes from the federal government rather than from state tax revenues, it is possible that Indiana's effort to help its needy citizens is greater than the previous analysis reveals. Therefore, Table 6 shows the public assistance payments from state and local sources as a percent of total personal income. Results indicate that for every \$100 of personal income, Indiana spent thirty-three cents, half of the national average expenditure, and less than its neighboring states during the period 1965-69. The 1970-73 results are similar: Indiana spent slightly more than half the national average, and less than neighboring states (with the exception of Kentucky) on public assistance payments as a percent of total personal income.

In order to determine whether Indiana's low scores in providing assistance are due to the fact that it has a smaller amount of poor people

TABLE 6

Public Assistance Payments from State and Local Sources as a Percent of Total Personal Income, 1965-69 and 1970-73

	1965-69 (%)	1970-73 (%)	Per Ch
Indiana	.33	.47	4
Illinois	.57	.88	5
Kentucky	.47	.45	-
Michigan	.60	1.13	8
Ohio	.57	.72	2
United States	.66	.91	3

SOURCE: Calculated from U. S. Department of Health, Education and Welfare, *Social Security Administration*, and U. S. Bureau of the Census, *Statistical Abstract of the United States*.

than do the other states studied, the number of ADC and public assistance recipients divided by the total number of poor people defined by the 1970 census. These data, presented in Table 7, indicate that Indiana has a lower percentage of its poor people on the ADC program or any of the assistance programs than all of the surrounding states or the national average. In fact, Indiana's percentage of poor people who were also public assistance recipients was less than half the percentage for the nation as a whole.

CHANGES IN PUBLIC ASSISTANCE

Indiana is not keeping up with the nation with the surrounding states in its effort to help the poor. In making decisions about public assistance programs, the citizens of Indiana and their elected representatives should realize that while Indiana has shown relative improvement from 1965-69 to the 1970-73 period, it is significantly below the national average and below that of the adjoining states.

Two major changes in Indiana's public assistance program are not reflected in this analysis. First, on January 1, 1974, the Federal Government took over the funding of some of the programs (Old Age Assistance, Aid to the Disabled and Aid to the Blind) which were included in the public assistance data. The second major change occurred in July of 1974. The ADC program in Indiana underwent two major changes: the maximum payments were increased, but at the same time a "ratable" reduction of 25% was put into effect. The ratable reduction simply means that a lower percentage of the projected needs of families could be used in determining eligibility for the ADC program. Data are not available which would indicate the effects these changes have had on Indiana's relative efforts to provide aid to its poor.

TABLE 7

ADC and Welfare Recipients as a Percent of the Number of Poor People, 1969

	ADC Recipients (%)	Public Assistance Recipients (%)
Indiana	14.6	19.5
Illinois	32.3	42.4
Kentucky	17.8	29.4
Michigan	30.0	40.9
Ohio	25.2	36.2
United States	27.0	39.4

SOURCE: Calculated from U. S. Bureau of the Census, *Census of Population: 1970, Detailed Characteristics, Welfare in Review and Public Assistance Statistics*.

Languages and International Trade

TRICE GOUVERNAYRE AND GUY LAUVERGEON

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International trade currently accounts for approximately 180,000 jobs in Indiana. In view of the state's expansion into this area of trade, a knowledge of foreign languages is becoming increasingly important to the business community. In an attempt to identify the nature and magnitude of the need for languages, and to find out how companies have coped with these needs, a questionnaire sponsored by the Indiana

The authors wish to acknowledge the assistance of the Indiana Department of Commerce, Lieutenant Governor Robert Orr, Tom Hudson, Mrs. Caterina Gregor and Dr. Richard N. Farmer.

Department of Commerce and the Indiana University Department of International Business was sent to 200 firms listed in the *Indiana International Trade Directory*. The number of questionnaires sent to particular industries was based on the relative importance of each in international trade, but a broad geographical distribution was retained. Within each industry, companies employing from 50 to 5,000 people were selected at random. Thirty-one percent of the selected companies responded to the survey.

Companies were asked which languages are used most frequently in their foreign operations. Spanish ranked first, French second and German third, the three languages accounting for 77% of foreign languages used by Indiana corporations. Communication in these languages is generally in the form of letters, and the main subjects concern business or economics.

Most firms handle their business in English, but half of them are aware of potential improvements through more extensive use of foreign languages. Forty percent of the companies use outside translators. The remaining sixty percent have one of the following characteristics: (1) Their operations abroad are small, and they have on their staffs someone who can speak the language. (These risk possible mistakes by relying on a nonprofessional translator.) (2) Their operations abroad are so impor-

tant they have developed their own translation force. One surprising discovery was that translation services, internal or external, are often unavailable.

Linguistic barriers often limit trade opportunity. Middle East countries have rising purchasing power owing to their oil resources; however, only 1% of the surveyed companies show an interest in Arabic. Trade opportunities are good, but the lack of people fluent in Arabic prevents complete market penetration.

The organizational material involved in establishing a subsidiary abroad or setting up a joint venture usually requires the utilization of a foreign language. If a company cannot rely upon its translation expertise, the language requirement becomes a major obstacle to the project, and thus may be a constraining factor in the development of international trade in Indiana.

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Bernard Faulkner, Gladys Huang, Judy Norman and Richard Spiers

UNITED STATES-INDIANA BUSINESS INDICATORS*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES			INDIANA		
	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT						
Nonagricultural employment	Nov. 117.8	117.7	119.0	Nov. 110.3	110.3	113.5
Manufacturing employment	Nov. 95.1	95.1	101.0	Nov. 91.7	91.9	100.1
Average weekly hours (no.)	Nov. 40.0	40.0	39.7	Nov. 40.2	39.7	40.2
Average weekly earnings (\$)	Nov. 197.20	196.00	182.22	Nov. 227.13	222.72	210.25
Nonmanufacturing employment	Oct. 127.0	126.8	126.6	Nov. 122.5	122.5	121.6
Unemployment rate (%)	Nov. 8.3	8.6	6.6	Nov. 7.8	8.5	6.4
Unemployment rate—married males (%)	Nov. 4.9	5.2	3.3	—	—	—
Continued unemployment claims	—	—	—	Nov. 254.9	348.9	475.7
PRODUCTION						
Luminous coal production	Oct. 117.3	116.6	112.8	Nov. 104.4	123.4	26.3
Industrial electricity production	Sept. 139.6	135.9	148.3	—	—	—
Industrial electricity sales	—	—	—	Oct. 130.4	137.0	143.4
Manufacturing production	Nov. 115.5	115.2	120.9	Oct. 124.3	127.5	134.6
Raw steel	Oct. 88.0	95.0	120.7	Oct. 117.6	127.3	142.4
CONSTRUCTION						
Construction activity—total	Nov. 179.7	174.4	170.4	Nov. 165.8	164.9	173.1
Residential housing starts	Nov. 107.0	113.4	79.2	Nov. 106.3	98.1	120.7
Residential expenditures	Nov. 187.1	183.2	167.4	Nov. 217.9	220.6	257.8
Nonresidential expenditures	Nov. 176.1	170.2	171.8	Nov. 135.7	133.6	142.7
Public expenditures	Nov. 168.0	162.9	148.7	—	—	—
Public works and utilities	—	—	—	Nov. 147.0	145.7	111.9
OTHER INDICATORS						
Checks to demand deposits	Nov. 333.9	328.5	329.6	—	—	—
Bank debits	—	—	—	Oct. 333.9	323.6	335.5
Personal income per capita (\$)	Oct. 5,939.34	5,994.21	5,579.80	1975 II 5,325.49	5,429.02	5,165.85
Passenger car sales (thousands)	Nov. 744.0	889.0	604.0	Oct. 21.4	18.9	17.8
Year to date (thousands)	Nov. 7,939.0	7,195.0	8,364.0	Oct. 178.3	156.9	203.6

NOTE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

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UNITED STATES BUSINESS INDICATORS
Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rate</i>		
	<i>1975 3rd Qtr.</i>	<i>1975 2nd Qtr.</i>	<i>1974 3rd Qtr.</i>	<i>1975 3rd Qtr.</i>	<i>1975 2nd Qtr.</i>	<i>1974 3rd Qtr.</i>
Gross national product (GNP)	1,504.4	1,440.9	1,416.3	18.8	7.0	9.7
GNP (\$ 1958)	808.6	783.6	823.1	13.4	1.9	-1.9
GNP potential level (\$=1958)	925.5	916.5	889.9	4.0	4.0	4.0
Government purchases	343.5	338.1	312.3	6.5	8.1	10.8
Personal consumption expenditures	968.8	938.6	901.3	13.5	11.6	15.7
Private domestic investment	179.1	148.1	205.8	113.9	-32.0	-10.9
Corporate profits before tax	134.6	113.3	157.0	99.2	57.1	62.8
Business inventories	264.4	265.5	253.6	-1.7	-6.4	25.8
Federal surplus—deficit (NIA)	-67.0	-103.3	-1.9	—	—	—

Monthly Data

	Current Levels or Annual Rates				Percentage Change at Annual Rate			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index†	Nov.	165.6	164.4	154.3	Nov.	8.6	8.1	11.7
Consumer price index—food†	Nov.	180.9	179.9	168.8	Nov.	6.9	16.7	14.5
Wholesale price index†	Nov.	180.4	180.4	174.0	Nov.	0.1	23.5	18.2
Money supply (\$ billions)	Nov.	297.1	294.1	283.6	Nov.	13.0	−2.4	8.9
Money supply plus time deposits	Nov.	665.7	658.6	611.6	Nov.	13.7	4.3	8.2
Mobile home shipments (thousands)	Oct.	229.0	215.0	227.0	Oct.	113.2	−65.6	−78.5
Mortgages—outstanding (\$ billions)‡	Nov.	275.9	273.6	248.7	Nov.	10.6	14.1	2.6
Mortgages—new issues (\$ billions)‡	Nov.	51.9	68.3	23.5	—	—	—	—
Mortgage rate—new homes	Nov.	9.0	9.0	9.3	—	—	—	—
Prime rate business loans	Nov.	7.5	8.0	10.8	—	—	—	—

†Base period, 1967 = 100

‡All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>Nov. 1975</i>	<i>Oct. 1975</i>	<i>Nov. 1974</i>	INDIANA	<i>Nov. 1975</i>	<i>Oct. 1975</i>	<i>Nov. 1974</i>
Manufacturing	93.8	94.1	121.7	Manufacturing	91.6	86.9	87.
Food	93.9	94.1	93.5	Food	80.6	81.8	98.
Apparel and textiles	94.4	94.5	88.1	Apparel and textiles	91.2	90.1	85.
Lumber and wood	94.1	95.3	93.8	Lumber and wood	84.3	84.6	100.
Furniture	99.3	99.1	102.2	Furniture	99.0	102.1	89.
Paper	96.4	95.1	98.5	Paper	91.1	90.8	99.
Printing	99.3	99.1	102.6	Printing	92.2	92.3	110.
Chemicals	101.9	100.8	105.3	Chemicals	100.5	100.7	78.
Petroleum and coal	107.1	107.3	105.2	Petroleum and coal	71.4	71.6	110.
Rubber	113.0	114.3	123.3	Rubber	105.1	98.5	98.
Stone, clay, and glass	97.1	96.4	105.3	Stone, clay, and glass	94.9	94.6	103.
Primary metals	85.3	84.8	101.9	Primary metals	88.2	86.2	113.
Fabricated metals	96.0	96.0	104.1	Fabricated metals	102.9	105.4	113.
Nonelectrical machinery	99.0	99.1	112.2	Nonelectrical machinery	96.5	91.9	97.
Electrical machinery	89.6	89.2	97.1	Electrical machinery	91.0	87.2	99.
Transport equipment	83.8	83.4	87.3	Transport equipment	88.4	84.6	99.

INDIANA LOCAL INDICATORS Seasonally Adjusted Indexes Base Period: 1967 = 100

REPORTING CITIES	Oct. 1975	Sept. 1975	Oct. 1974
ANDERSON			
BD*	172.7	162.0	155.5
UC†	374.6	396.9	180.4
ES‡	137.0	140.3	165.6
DFORD			
UC	256.4	310.2	242.7
ES	128.6	141.1	125.9
MOOMINGTON			
BD	304.5	330.0	313.5
UC	364.5	439.3	376.5
ES	94.2	99.7	88.5
LUMBUS			
BD	361.8	363.6	262.2
UC	250.2	331.6	87.5
ES	143.1	159.6	152.7
NNERSVILLE			
BD	227.2	204.4	200.8
UC	214.5	247.2	143.7
ES	123.4	142.8	152.0
AWFORDSVILLE			
BD	319.6	287.0	244.3
UC	813.1	897.6	274.8
ES	154.2	149.6	145.3
ST CHICAGO			
BD	181.2	212.3	186.8
UC§	483.7	499.5	127.6
ES	77.4	86.9	107.0
KHART			
BD	279.2	244.7	223.4
UC	378.2	404.4	528.9
ES	140.6	145.4	144.1
ANSVILLE			
BD	195.8	204.6	198.0
UC	216.7	280.0	97.5
ES	120.9	125.8	136.8

INDIANA IN PERSPECTIVE

Index of Average Value Per Acre of Farmland
(1967 = 100)

Data are for March of each year.

	1973	1974	1975	Percent Change 1974-1975
States	150	187	214	+14
Indiana	131	161	200	+25
Ohio	129	173	209	+21
Kentucky	153	182	203	+12
Michigan	150	174	184	+ 6
Illinois	147	184	208	+13

REPORTING CITIES	Oct. 1975	Sept. 1975	Oct. 1974
FORT WAYNE			
BD	283.7	281.2	255.5
CUC	702.5	890.3	238.7
IES	100.5	95.4	124.7
FRANKFORT			
CUC	591.5	970.2	362.0
IES	145.5	156.3	164.6
GARY			
BD	311.4	331.6	270.8
CUC	277.8	270.6	155.6
IES	140.6	145.1	175.4
GOSHEN			
BD	239.2	252.1	212.2
IES	154.8	158.8	173.4
HAMMOND §			
IES	146.7	155.2	145.1
HUNTINGTON			
CUC	659.8	761.8	135.4
IES	120.5	119.7	135.1
INDIANAPOLIS			
BD	451.4	420.6	268.0
CUC	152.8	175.9	222.9
IES	133.4	143.2	145.8
JEFFERSONVILLE			
BD	326.9	308.9	487.4
IES	151.7	146.6	136.9
KOKOMO			
CUC	309.1	516.4	237.5
IES	136.5	166.6	196.5
LAFAYETTE			
BD	243.4	253.6	213.5
CUC	1,005.3	1,186.6	320.8
IES	127.3	121.3	159.9
LA PORTE			
CUC	586.4	562.8	164.8
IES	169.5	191.8	168.1
LOGANSPOUT			
BD	403.6	389.7	296.4
CUC	206.9	413.6	208.1
IES	229.5	292.3	180.3
MADISON			
BD	230.9	231.5	210.0
CUC	352.0	432.8	132.2
IES	102.1	127.6	126.6
MARION			
BD	232.6	194.4	199.0
CUC	198.9	311.7	232.0
IES	113.0	113.6	117.7
MICHIGAN CITY			
BD	260.4	150.3	246.6
CUC	394.4	398.6	158.3
IES	167.3	177.4	180.7

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§ Continued Unemployment Claims of

East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Oct. 1975	Sept. 1975	Oct. 1974	REPORTING CITIES	Oct. 1975	Sept. 1975	Oct. 1974
MISHAWAKA				SOUTH BEND			
BD*	378.7	133.6	241.0	BD	188.0	237.0	213.0
IES‡	127.5	131.1	121.5	CUC	271.3	368.5	190.0
MUNCIE				IES	101.1	105.3	102.0
BD	287.5	291.3	234.3	TERRE HAUTE			
CUC†	206.7	232.5	113.7	BD	255.9	283.2	238.0
IES	105.0	112.8	121.4	CUC	292.2	316.6	221.0
NEW ALBANY				IES	151.4	157.7	169.0
BD	448.3	409.5	416.4	VALPARAISO			
CUC	1,036.7	1,000.6	457.5	CUC	319.7	395.5	289.0
IES	93.7	99.2	97.5	IES	151.0	154.3	158.0
NEW CASTLE				VINCENNES			
BD	277.6	264.8	240.0	BD	245.6	249.1	218.0
CUC	201.8	301.2	158.8	CUC	200.4	247.4	170.0
IES	145.3	143.0	148.7	IES	111.0	117.1	127.0
PERU				WABASH			
BD	289.3	294.3	254.2	BD	212.1	230.0	209.0
CUC	198.0	316.3	133.5	CUC	315.3	359.0	123.0
IES	175.3	178.0	160.8	IES	146.4	154.2	140.0
RICHMOND							
BD	202.4	197.9	173.7				
CUC	561.4	627.8	294.5				
IES	188.0	197.1	213.4				
SEYMOUR							
BD	350.1	321.4	312.7				
CUC	224.5	263.2	143.0				
IES	98.8	98.8	116.7				

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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51

MARCH-APRIL 1976

Indiana Business Review

Financial Institutions in Indiana Donald H. Sauer	1
A Brief History of Hoosier Hospitals Joanne S. Dring and J. B. Silvers	7
Yankee Peddlers and Specialty Stores: Vignettes of Changes in Retailing P. Ronald Stephenson	14
From Statehood to the Seventies John Wissel	17
Mineral Resources in Indiana's Economic Development John B. Patton	20
A Perspective on Population Robert A. Calhoun and Morton J. Marcus	26

Financial Institutions in Indiana

RONALD H. SAUER

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Indiana's system of financial institutions dates back to the days before Indiana gained statehood. The system has grown and changed as the economic and political evolution and development of Indiana have progressed. Early financial needs of the territory were poorly served as money was drained from the West to the more highly developed sections of the East through unfavorable balances of trade between the regions.

The charter of the First Bank of the United States expired in 1811, leading to an era of "wildcat" banking until the Second Bank of the United States was chartered in 1816. The typical "wildcatter" would engrave a supply of notes, open his bank and put his notes in circulation using every means imaginable, including selling or loaning them for as little as half their face value. If the business prospered he would redeem the notes; if not, he would move out of the community leaving the people with worthless paper. The few banks that operated in the Indiana Territory were generally nomadic, and appeared early at Brookville, New Harmony and Lexington. Such banks were the direct result of the lack of laws and regulation coupled with the opportunities for fraudulent speculation.

EARLY BANKING LEGISLATION

The territorial legislature in session at Corydon during the summer of 1814 attempted to establish some stability and permanency to

southern Indiana banking by chartering two banks. One was to be located at Vincennes, the seat of the territorial government, the other at Madison, a town of 700 to 800 inhabitants at that time. As things developed, neither was long-lived, though both were recognized by the state constitution of 1816.

Legislation passed January 1, 1817, elaborated the charter of the Vincennes Bank. The law named it the "Bank of Vincennes the State of Indiana" and made it a state institution. The law further provided that the state was to be divided into fourteen districts and each was to be served by a branch of the Bank of Vincennes. For various reasons, political as well as economic, only three of the proposed fourteen branches were actually organized. They were located at Brookville, Corydon and Vevay. Speculation and imprudent management policies created severe problems for the bank and in June, 1821, the Vincennes Bank was declared insolvent by its president and was closed.

The life of the Farmers and Mechanics Bank of Madison was only slightly longer than the Bank of Vincennes. The directors and stockholders of the Madison bank prevented it from becoming a part of the state institution. The record suggests that the Madison bank was well managed, but the United States Bank refused to accept anything as cash except its own notes and specie. This position on the part of the United States Bank in effect drove the Madison bank's notes out of circulation. As a result, the Madison bank closed in 1824 after having paid off all of its obligations in full.

During the decade following the closing of the Madison bank there were no banks located in Indiana. The branches of the United States Bank located at Cincinnati and Louisville to a degree supplied the state's need for a medium of exchange.

Second State Bank. The reelection of Andrew Jackson in 1832 and the public general opposition to the Second Bank of the United States assured that its charter would not be renewed when it expired in 1836. The people of Indiana became concerned about the need for increased banking facilities. In January, 1834 the Indiana General Assembly enacted legislation chartering the Second State Bank of Indiana.

The legislation was carefully drawn and the provisions were designed to provide for state participation in management to preclude "wild-cat" practices and reduce unsound policies and practices. The law provided for branches to be distributed around the state and for the organization of additional branches as the economic development of the state indicated a need for increased banking facilities. The head office of the bank was to be in Indianapolis but there was to be no parent bank and all branches were to be equal and insulated from undue influence by the Indianapolis branch.

Other aspects of the law intended to protect the general public included: a prohibition of dealing in real estate; provision for ownership of one-half of the stock by the state; and the election of the president and directors of the

bank and one director for each branch by General Assembly. The law empowered the Bank Board to examine the branches or call reports without notice and required it to report annually to the General Assembly. The law also contained provisions restricting "insider" transactions. The care with which the Second Bank chartering legislation was drafted coupled with the integrity and competence of management provided financial stability in Indiana through the panic of 1837 and until its charter expired in 1859.

The two oldest banks currently operating in Indiana can be traced back to origins in the branches of the Second State Bank of Indiana. The oldest is generally agreed to be the Madison Bank and Trust Company. The next oldest in terms of continuous operations, dating back to 1834, is the Indiana National Bank of Indianapolis.

THE FREE BANK ERA

The Indiana Constitutional Convention of 1851, dominated by Jeffersonian philosophy and government, laid the groundwork for a new banking system. The constitution prohibited the state from engaging in corporate business, thus eliminating state ownership and management of banks. Moreover, the expanding economy precipitated an increased demand for credit facilities. The Second State Bank's general conservative operating policies in the face of the growing need for financing created strong

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opposition to its position of monopoly. As a result, the constitution provided for a general banking law that would permit the organization of many privately owned, independent banks thus making possible a "free banking system" in Indiana.

The underlying principle of a free banking system was that some prescribed number of persons could, by complying with various statutory provisions, obtain a bank charter from a designated government agency or official rather than by legislative enactment. Implicit in this concept was the premise that any person was capable of managing a bank.

Michigan was the first state to pass a free banking law in April, 1837, followed a year later by New York and other northeastern states. Indiana's turn came in 1852 and on May 1 the Indiana General Assembly passed a banking act providing for the establishment of "free banks." By July 1, 1854, forty-six banks were in operation and widespread concern developed about the unsettled banking conditions that were emerging. The General Banking Law was rewritten in 1855 and in subsequent sessions of the General Assembly, eliminating many of the deficiencies by providing for charter chartering provisions and regulations governing the powers of banks.

BANK OF THE STATE OF INDIANA

The Second State Bank of Indiana developed a record of which everyone could be proud and earned a reputation as the "Best in the West." It was also a very profitable bank. Unfortunately the Second State Bank was winding down its affairs in 1854 in anticipation of the expiration of its charter at the same time the money markets were becoming unsettled.

A group of lobbyists, aware of the profitability of the Second State Bank of Indiana, approached some of its directors suggesting that it be retained or commissioned, for a fee of \$100,000, to engineer through the legislature a

renewal of the Second State Bank's charter. The directors flatly rejected the idea. The lobbyists changed their goal and began a campaign to obtain a charter for a new private bank to move into the dominant position being vacated by the Second State Bank. They caused to be introduced in the 1855 session of the legislature a bill to charter a new state bank to be known as the Bank of the State of Indiana.

The promoters were alleged to have represented to the legislature that the charter was in effect the same as the one for the Second State Bank with only minor changes to make it conform to the requirements of the constitution and eliminate some minor deficiencies in the earlier charter. In fact, the proposed charter was in no way similar other than by name to the Second State Bank, since the constitution prohibited state ownership and active state participation in the management of banks. The bill was passed in March, 1855.

Governor Joseph A. Wright objected to the bill for many reasons, including the lack of legislative debate, the bank's proposed tax exemption, the bank's name, which he felt was adopted to intentionally mislead people, and the overall atmosphere of uncertainty, unfairness and corruption surrounding the bill from its introduction to its final passage. As a consequence, he vetoed the bill, but the legislature overturned the veto. Historians have characterized the bank as having been conceived in a spirit of corruption and organized by questionable and reprehensible methods but managed along a safe and conservative course.

NATIONAL BANKING ACT

During the late 1850s it became apparent that the banking facilities in many communities were inadequate to meet the economic strains, and specie payments were suspended. To solve this problem and also to aid in the financing of the War Between the States, Congress passed the National Banking Act of 1863, providing

for the chartering of banks by the United States government. Through the inducement offered banks to obtain circulation based upon the security of bonds, the act fostered both a ready market for war-created debt and a national currency.

A further objective of the National Banking Act was to correct some of the abuses of free banking by requiring nationally chartered banks to meet minimum paid-in capital requirements. Moreover, it was hoped that state banks would seek or convert to national charters, but few did. In an effort to force conversion, Congress (in March, 1865) imposed a 10% tax on state bank notes issued after July 1, 1866. The tax worked, as the number of state chartered banks in the nation dropped from approximately 1,500 in 1863 to 277 in 1873.

The competition of the national banks and the tax on state bank notes had a debilitating impact on the Bank of the State of Indiana. As a result, the General Assembly gave it authority in 1865 to discontinue operations. Most of its nineteen branches obtained national bank charters and continued to operate as independent banks in their respective communities (Lima, La Porte, Plymouth, South Bend, Fort Wayne, Lafayette, Logansport, Indianapolis, Richmond, Connersville, Rushville, Madison, Jeffersonville, New Albany, Bedford, Vincennes, Terre Haute, Muncie and Lawrenceburg). The cessation of operations by the Bank of the State of Indiana ended statewide banking systems in Indiana.

DISCOUNT AND DEPOSIT ACT OF 1873

Economic developments following the War Between the States coupled with the federal tax on state bank notes caused state banks to emphasize their deposit business. This necessitated a revision of the banking statutes in Indiana to set forth procedures for incorporation and operation of banks of discount and

deposit. Such an act was passed in 1873, the Discount and Deposit Act of 1873 with detailed regulatory measures, though often amended and expanded, is still the basic law governing the incorporation and operation of state chartered banks. The 1873 act provided for a system to supervise and examine banks. The act placed the supervisory function with the state auditor.

Following the act of 1873 the chartering of state banks began to expand gradually and accelerated near the turn of the century. In 1900 state chartered banks in Indiana had passed the total for national banks operating in the state—127 state to 123 national—though state banks held only about one-third the volume of assets held by national banks. Beginning in 1900, a chartering race between state and national banks got underway. During the next twenty-five years 739 state bank charters and 213 national bank charters were granted. The total number of banks operating in Indiana reached a peak of 1,110 in 1923. In 1924 bank suspensions (failures, mergers, liquidations) began to exceed new charters and by 1930 the total number of banks operating in Indiana had decreased to 915. The decline continued to 600 in 1935 and to 492 at the close of 1945.

PRESENT BANKING STRUCTURE

Since the passage of the Federal Reserve Act of 1913, state chartered banks can voluntarily seek membership in the Federal Reserve System. Those which do are generally referred to as state member banks. State banks which are not members of the Federal Reserve System may seek insurance of their deposits from the Federal Deposit Insurance Corporation. Both state member banks and national banks are required to obtain Federal Deposit Insurance Corporation insurance of accounts. National banks are also required to be members of the Federal Reserve System. All but two of the

banks in Indiana at the end of 1974 were insured; 121 were national banks, 51 were state member banks and 236 were insured state nonmember banks.

Indiana law authorizes state chartered banks to establish branch offices within any city or town within the county in which the principal office is located if there is no other bank's principal office located in that town. The McFadden Act governing national banks authorizes them to establish branches under the same conditions provided by state law governing state banks. As of December 31, 1974, there were 410 banks operating in Indiana. Of the total, 183 were unit banks with no branch offices. The remaining 227 banks operated 842 branches for a total of 1,252 banking offices in the state.

Bank deposits in Indiana totaled \$16,512,931,000 at the end of 1974. Size of individual banks ranged from less than \$1 million to more than \$1.4 billion in deposits. Generally speaking, Indiana's banking system consists of a large number of relatively small banks. For example, 265 banks, nearly two-thirds of the total, had deposits of less than \$25 million at the end of 1974. At the other end of the spectrum, only twenty-eight banks in the state had deposits of more than \$100 million.

SAVINGS AND LOAN ASSOCIATIONS

At about the time that privately owned banks were becoming an important force in the economic structure of Indiana, another type of financial institution made its appearance. These *mutual organizations* were generally referred to as "building and loan associations." Legislation authorizing institutions of this type developed during the 1850s beginning with the Voluntary Association Act of 1852. Amendments in February, 1853, to the act of 1852 authorized voluntary association "to purchase and hold real estate for the purpose of erecting, main-

taining, and repairing buildings thereon for rent or occupying by members thereof." The acts of 1852 and 1853 would appear to have set the stage for passage of the Building and Loan Act of 1857.

The 1857 act provided for the organization by not fewer than fifty persons of a type of institution whose life was to be of eight years' duration or less, that was truly mutual in character and was for the purpose of providing a group of individuals an opportunity to pool their resources and build a fund from which each member might borrow to purchase or build a home. The first association to be formally incorporated under the Building and Loan Act was the Indianapolis Building, Loan Fund and Savings Association. There is some evidence to suggest that the association had been organized prior to the act of 1857 and that, indeed, its articles of association may have served as the pattern for the 1857 act.

The early growth of the building and loan industry centered in prosperous and growing communities such as Fort Wayne, Indianapolis, Madison, Vincennes and Jeffersonville. The number and size of building and loan associations expanded significantly in the years following the 1857 act, creating a need to review and revise the act. A new building and loan law was passed in 1873 which was repealed along with the 1857 act by a new law in 1875. Significant legislation was passed in several sessions of the General Assembly including 1885, 1893, 1897, 1911, 1913, 1931 and the comprehensive Financial Institutions Act of 1933.

In 1933 the United States Congress passed the Home Owners' Loan Act which provided for the federal chartering and supervision of savings and loan associations by the Federal Home Loan Bank Board. The National Housing Act of 1934 had major impact on the savings and loan business by creating the Savings and Loan Insurance Corporation to insure accounts in savings and loan associations. All federally chartered associations are required to insure

accounts. State chartered associations may apply for insurance of accounts and most are insured.

The savings and loan industry in Indiana was made up of 176 associations at the end of 1974. Seventy-two of these associations operated under state charters and 104 were federally chartered. Assets held by savings and loan associations in Indiana totaled \$5.7 billion December 31, 1974.

MUTUAL SAVINGS BANKS

In 1869 the General Assembly passed the Savings Bank Act providing for the organization of a new type of bank as a mutual association. The statute was very detailed and regulated the activities of savings banks very closely, ranging from limitations governing lending policies to limitations on officers' salaries.

The greatest number of mutual savings banks operating in Indiana at any one time was ten. Since 1900 the largest number has been five. Currently, four mutual savings banks are in business in Indiana—one each in Evansville, Terre Haute, Lafayette and La Porte. Assets for the four savings banks totaled \$195 million December 31, 1974. All four of the savings banks began business during the period 1869-71.

CREDIT UNIONS

Credit unions in Indiana are relatively new to the financial system compared to other types of financial institutions. Although they appeared on the scene a little more than half a century ago, they have developed largely since World War II, in terms of resources. The first credit union in Indiana, the H. P. Wasson Credit Union, was chartered July 18, 1923. The H. P. Wasson Credit Union was liquidated in 1960. The oldest operating credit union in Indiana is the South Bend Post Office Credit Union, which was chartered May 7, 1924.

Congress passed the Federal Credit Union Act June 26, 1934, providing for federal chartering. More recently federal legislation provided for insurance of share accounts by National Credit Union Administration. As the end of 1974 there were 603 active credit unions (487 federal and 116 state) in Indiana with total assets of \$804 million.

SUPERVISION AND REGULATION

All of the financial institutions in Indiana are examined, supervised and regulated by one or more government agencies. Numerous regulations and statutes govern the activities of financial institutions, but in addition all of the types of institutions mentioned here are examined periodically for solvency.

State chartered financial institutions in Indiana are regulated and examined by the Indiana Department of Financial Institutions. The department was established by the Indiana Financial Institutions Act of 1933. In addition to state chartered institutions that are insured by an agency of the federal government are regulated and examined by that agency, except state chartered banks that are members of the Federal Reserve System. The latter are examined by the Federal Reserve staff. Federally chartered financial institutions in Indiana are regulated and examined by the respective federal chartering agencies, such as the Comptroller of the Currency (national banks), the Federal Home Loan Bank Board (federal savings and loan associations), and the National Credit Union Administration (federal credit unions).

Almost every session of the General Assembly and the United States Congress consider legislation that affects the financial institutions of the state. Moreover, various supervisory agencies are continuously reviewing and amending regulations pertaining to operations, powers and activities of the institutions. Though the state continues to preserve the dual system concept insofar as chartering of the principal types

financial institutions by state and federal agencies is concerned, there seems little question that federal agencies are wielding increasingly greater influence over the regulation and supervision of financial institutions.

Major legislation is currently under consideration in Congress with respect to so-called major reform of the financial institutions' regulatory structure, and alterations of the powers of the various types of private financial institutions. It currently appears unlikely that any sweeping changes will be made in 1976, but the growing relative importance of federal regulations as opposed to state is probable.

Further, financial institutions will tend to become more similar in their statutory powers and operations in the future rather than retain the current high degree of specialization.

NOTE: The author relied on a variety of sources for information cited in this article. Of particular help were: *Report of the Study Commission for Indiana Financial Institutions* (Indianapolis: William B. Burford Printing Co., 1932); Jon J. Prager, *An Analysis of Bank Chartering Policies in Indiana* (Unpublished doctoral dissertation, Indiana University, 1966); Logan Esarey, *State Banking in Indiana* (Indiana University Studies, vol. 10, no. 2); and various annual reports of the Indiana Department of Financial Institutions and the Federal Deposit Insurance Corporation.

A Brief History of Hoosier Hospitals

DANNE S. DRING AND J. B. SILVERS

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In 1867 a brave young woman from McCordsville, Indiana, convinced an Indianapolis physician, John Stough Bobbs, to perform exploratory surgery hoping he could correct a painful condition that had plagued her for four years and was threatening her ability to work. Dr. Bobbs was much less eager for the operation than his patient. Surgery in those days was grim under the best of conditions, and exploratory work, without knowing which organ was afflicted or even where to begin the incision, was even more dangerous than operating for a known cause. X-rays, antiseptics and trained nurses were all in the future and surgeons had no knowledge about the prevention of surgical infections.

Despite the odds, the surgery was successful, and the patient lived for forty-six more years without a trace of the former condition.

It was later discovered that Dr. Bobbs had performed an original surgical technique for which he earned a page in medical history as the "father of cholecystotomy," the first doctor to perform a draining of the gall bladder.¹

In tracing the development of health care in Indiana, one other fact stands out about Dr. Bobbs' operation. The patient's survival was probably due in large part, if not entirely, to Dr. Bobbs' decision not to use the local hospital for the surgery. Instead he performed the operation in a bare, barnlike room which he rented for the occasion and converted into an operating room.

If surgical techniques were primitive and chancy, mid-nineteenth century hospitals were

1. Thurman B. Rice, M. D., *One Hundred Years of Medicine in Indianapolis, 1820-1920* (Indianapolis: Indiana State Board of Health).

health hazards, frightening to the public, and to be avoided whenever possible. Despite the lofty aims of those responsible for the development of the earliest hospitals, few restorative services could be provided for the sick.

During the mid-nineteenth century, developments and discoveries began to occur elsewhere that laid the foundation for modern hospital care, but these did not reach Indiana until the 1880s. The reforming work of Florence Nightingale, which was basic to hospital development, started in 1854 at a military hospital during the Crimean War. Shocked at seeing sick soldiers lying amidst dirt and vermin, Miss Nightingale developed a hospital laundry service, department of supplies and diet kitchen. It was claimed that as a result of her work the mortality rate declined from 40% to 2%.

Miss Nightingale's techniques were introduced in the United States during the Civil War; however, they did little to control death by disease. Statistics indicate that of the 196,363 Indiana volunteer enlistments from 1861 to 1865, 2,971 died of wounds and 17,785 of disease.² Civil War nurses were untrained volunteers, and physicians, although many were sent to care for the sick soldiers, lacked the necessary knowledge.

After the Civil War, however, hospitals began to organize nursing schools where the organizational techniques developed by Miss Nightingale were taught. Indiana's first nursing school was opened in 1883 by the Indianapolis City Hospital, just ten years after Bellevue Hospital in New York City started the first nursing school in the United States.

Between 1860 and 1890, Joseph Lister made his historic contributions to health care by proving the need for antiseptic conditions, and only then did mortality rates from surgical procedures begin to decline. While Lister was working to prove his theory, surgeons every-

where were practicing suppuration (the charge of wounds). They did not yet believe keeping the hospital environment clean sometimes wore their operating coats months without having them cleaned. As a result, the mortality rate in hospitals was between 90% and 100%. It's easy to understand why Dr. Bobbs' patient had better survival chances outside of the hospital. Lister's discoveries, however, that suppuration was dangerous and that antiseptic conditions were required, laid the groundwork for the aseptic conditions that could be provided only in hospitals.

Antiseptics were first introduced to Indianapolis physicians during the years 1879-1886 when the noted Indiana doctor, William N. Wishard, was superintendent of the Indianapolis City Hospital which now bears his name, Wishard Memorial. Dr. Wishard's tenure was characterized by many improvements in institutionalized health care, and represented the start of a better era for hospitals and their patients.

PIONEER MEDICINE

Although the state's medical history may have been enriched by events that occurred in the capital city, it nonetheless began in Vincennes much earlier. In 1792 General George Washington sent Dr. Elijah Tisdale to the territory to become Indiana's first physician. Tisdale was to assist the soldiers on duty at Fort Vincennes. Dr. Tisdale was said to be a well-informed physician for the period. The settlers were no doubt fortunate that in 1796 when he resigned his commission he decided to go into private practice in Vincennes, remaining there until his death in 1802. By 1802 he had a colleague, another army surgeon assigned to the fort, who also treated private patients.

The life of the pioneer doctor in Indiana was as difficult as that of other settlers. "Wolves, bears, panthers, wildcats, wild h-

2. Dorothy Ritter Russo, "Indiana Doctors in Wars," in *One Hundred Years of Indiana Medicine* (Indianapolis: Indiana State Medical Association).

and rattlesnakes might at any time add a bit of adventure to the prosaic practice of medicine."³ During the state's first General Assembly, meeting in Corydon, members passed a bill permitting a doctor to charge twice the daytime rate when traveling at night to visit a patient because of the dangers he might encounter. Doctor's fees in those days were said to be \$1.50 to \$2.00 for a town visit and \$.12½ per mile for out-of-town daytime visits.

By 1817 Vincennes doctors had organized the first medical society in Indiana, which had authority to examine and license applicants for admission to the profession and to expel members who were guilty of intemperance or immorality. It was a Vincennes physician, Dr. J. Vanhook, who wrote the first medical book in the state with the proprietor of the state's pioneer newspaper, the Vincennes *Western Sun*, as publisher. That newspaper is also said to have published the first public health advice when in 1808, it urged the people "to improve the public health by cleaning out decaying grass in the river" which was believed to breed disease.⁴

MEDICAL EDUCATION

Vincennes University was authorized to establish a medical department in 1837, but the school closed due to financial difficulties before graduating any students. The state's first medical school was later organized in La Porte, and began instruction in 1843, continuing until 1850 when it merged with the Indiana Medical College in Indianapolis. The La Porte school graduated two well-known doctors: one was William W. Mayo, father of the Mayo brothers of Rochester, Minnesota; another was William I. Wishard, first in the distinguished Wishard line of doctors in Indiana.

3. Madge E. Pickard and R. Carlyle Buley, *The Midwest Pioneer: His Ills, Cures and Doctors* (Crawfordsville, In.: R. E. Banta, 1945).

4. Thurman B. Rice, M. D., "History of the Indiana State Board of Health," in *One Hundred Years of Indiana Medicine* (Indianapolis: Indiana State Medical Association).

Medical schools continued to open in various parts of Indiana. Some were legitimate, others diploma mills. Serious physicians, working through their county medical societies and through the Indiana State Medical Association organized in 1849, tried to raise the standards of medical education. The unsuspecting public, however, had no real protection against the uneducated and unprepared persons who, as late as 1887, could secure a license to practice medicine in Indiana simply by having practiced for ten years or by possessing a diploma from any medical college. During that year, Indiana had a high percentage of physicians per inhabitants. One doctor, anxious for reform, told his colleagues at a state medical association meeting that other states, particularly Illinois, had more stringent laws that caused a certain class of medical practitioners to move to Indiana.

In 1897 the Indiana General Assembly passed the Medical Practice Act which established a state board of medical registration and examination to regulate the practice of medicine, surgery and obstetrics, and to license physicians. From that period on, physicians were required to prove they had either graduated from a college that maintained a satisfactory standard of medical education, or had passed an examination in order to be licensed.

In 1903 the Indiana University School of Medicine, now the largest medical school in the United States, was founded. In 1909 the General Assembly mandated that the university assume the responsibility for all medical education in the state. The I. U. School of Medicine was the fourth medical school in the nation, after Johns Hopkins, Harvard and Western Reserve, to require two or more years of collegiate work for admission.

HOSPITALS DEVELOP

The hospital as a concept and institution has been with us for centuries, but as a health-restoring institution, it is a recent development

for Indiana and the nation. The desire to help the sick, especially the sick poor, has always been demonstrated, but it was not until the twentieth century that the extensive revelations of science gave us modern hospital care. About 100 years after the nation's first community hospital was chartered in Philadelphia at the insistence of Benjamin Franklin, the Indianapolis City Hospital—the first general hospital in Indiana—opened to the public in 1866. Although institutional care was not unknown in Indianapolis (Central Hospital for the Insane, the School for the Deaf and the School for the Blind were all erected in the 1840s), Dr. Livingston Dunlap, the man who promoted the idea of a city hospital, met with opposition on every side. In 1855 when an epidemic threatened, Dr. Dunlap took advantage of the community's fear to get the hospital started. After it was built, however, it was not used until the Civil War, when it became a military hospital. After the war, following a stint as a soldier's home, the hospital was finally opened to the public with halfhearted community support. The appropriation for the year was \$6,000. In 1974, annual expenses for Wishard Memorial Hospital were close to \$30 million.

Three years later, St. Joseph Hospital opened in Fort Wayne. In 1872 St. Mary's Hospital in Evansville began public operation. Institutions continued to open in other parts of the state, and by 1900, Indiana had fifteen hospitals.

Hospital construction during the twentieth century was characterized by an unprecedented pattern of growth, influenced primarily by the development of adjunct services and by heightened public acceptance of hospitals and confidence in their services. Communities with leadership and funds available wanted a hospital. Construction reached a peak during the 1920s.

It was in the twenties that the position of hospital superintendent, or business manager, was established and became the forerunner of

today's hospital administrator. Until that time many of the responsibilities for operating a hospital fell to board members, while nurses supervised the patients. In 1934 the first program in hospital administration was launched by the University of Chicago, thus identifying a new profession. Now Indiana University, along with nearly thirty other universities, offers a master's program in hospital administration.

Hospital construction in Indiana slowed during the Depression and World War II when materials were scarce, but by 1945, when the State Board of Health conducted a study of the state's hospitals, Indiana had 111 general hospitals, plus 11 for mental patients, 11 for tuberculosis patients and 32 special hospitals serving other select types of patients.⁵ Then in 1946, hospital construction received another boost with the Hospital Survey and Construction Act (Hill-Burton Act) which made federal funds available for new hospitals and for the expansion, replacement or remodeling of existing hospitals.

Today Indiana has 116 general community hospitals and 26 long-term or special institutions. Many of the special hospitals used in 1945 (for TB patients, for example) are no longer needed. The small profit-making institutions, which comprised 27% of the hospitals and 5.2% of the beds in 1945, have largely disappeared from the scene. Today, there are two proprietary hospitals in Indiana; most are nonprofit institutions governed by a community board of trustees. Although Indiana has many county hospitals, they also operate much like community institutions, as their operating funds are derived from patient revenues and are generally not subsidized by county funds. One major exception is the Wishard Memorial Hospital in Indianapolis, formerly Marion County General.

5. Robert L. Rogers, *Hospital Survey in Indiana* (Indianapolis: Indiana State Board of Health, 1946).

HOSPITAL COSTS

At the beginning of the twentieth century, services rendered in health care facilities were paid for either by independent or religious charities or by the patient. Costs ran around five dollars per week per patient and gradually increased as hospital services improved.

Even before World War I there were several congressional attempts to pass a national health insurance act, but the booming economy of the early 1920s sealed their fate. When the country began to feel the pangs of the Depression, however, the desperate need for an innovative way to meet the cost of hospital care gave rise to the Baylor Plan, forerunner of the Blue Cross plan. Under the Baylor program, the hospital was to provide twenty-one days of care to local school teachers who enrolled for six dollars per person per year. The program caught on across the nation, and the story of prepaid health care by Blue Cross, government and commercial insurance companies is now history.

When the State Board of Health conducted its statewide survey of hospitals in 1945, the per diem cost at general hospitals was \$7.53. By 1960—the year that Indiana initiated the nation's first Rate Review Program to control voluntarily hospital prices—the average cost per day in Indiana was \$32.93 (compared to \$12.23 for the U. S.).

In the fifties and sixties, medical science, engineering and technology were beginning to explode onto the health care scene, creating new and better ways to care for patients. Available then, or on the horizon, were open heart surgery, kidney transplants, renal dialysis, hip and knee replacements; diagnostic equipment such as brain scanners and total body scanners; and therapeutic equipment such as linear accelerators to treat cancer.

People began to use hospitals more; many health care services were available only in hospitals. At the same time, outpatient services also began to replace the services of the family

doctor. Outpatient services are the fastest growing segment of the health care delivery system, reaching four million people in Indiana alone during 1974.

Improvements in hospital services and consumer demand for those services are two of the major factors contributing to higher hospital costs. Other factors include inflation, government programs and regulations that increase the cost of operation, and increased labor costs. Because hospitals are a labor-intensified industry, with personnel costs accounting for 54% of the hospital industry budget in Indiana, wage and salary increases have more impact on a hospital's cost of operation than in an industry where labor traditionally runs one-third of total expenses.

These influences on hospital costs have combined to nearly triple the per diem expense of hospital services between 1960 and 1974, when the adjusted patient day cost was \$95.43. In Indiana, however, costs are considerably below the national average for a variety of reasons.

CONTROLS ON HOSPITAL COSTS

Members of the Indiana Hospital Association, in a move unprecedented anywhere in the health field, voted in 1959 to establish a Rate Review Program within Blue Cross, a major source of hospital income. Under the program, a Rate Review Committee (currently chaired by Samuel Frumer, professor of accounting at Indiana University Graduate School of Business), examines and determines in advance whether a hospital rate increase is justified, based on the financial information and budgetary concerns supplied by the institution. When the program was initiated, Indiana's hospital costs were a few cents higher than the national average. As the program matured, United States average costs began to exceed Indiana costs by wider and wider margins.

During 1974, the latest year for which comparative data are available, the United States average hospital costs, per day and per patient stay, were 18.63% higher than in Indiana. For a comparison of Indiana and U. S. averages of costs and other health care elements, see the accompanying table.

The Indiana Rate Review Program represents a stringent self-control mechanism, voluntarily imposed. Despite the restrictions of the program, however, both hospitals and the public benefit. Currently the federal government is conducting a research study of the Indiana program to determine whether it can be used in other states and to identify and examine the precise factors which have contributed to cost containment under rate review.

Indiana hospitals have also participated in area-wide and long-range planning since the 1960s in an effort to avoid unnecessary duplication of facilities and services. Federal law now requires approval by a government agency of any expansion of facilities or services costing \$100,000 or more, or of changing the bed count of a hospital. Health Service Agencies are under development in northern, central and southern Indiana under Public Law 93-641, and will be concerned with health facilities and services planning for the state.

In addition to rate review and long-range planning, Indiana hospitals also have programs of shared services that lessen capital expenditures and personnel requirements. Management engineering to assure optimum use of personnel, resources and facilities is also used by many Hoosier hospitals.

GOVERNMENT CONTROLS

Until Medicare was enacted in 1966, hospitals were fairly well insulated from government controls and regulations. As the federal government became a larger purchaser of health care, it instituted more controls to reduce or at least curtail the federal share of health care expenses

Indiana and U. S. Averages for Community Hospital Care, 1974

	Indiana	U. S.
Inpatient day cost	\$95.43	\$112.00
Increase over 1973	9.3%	11.0%
Inpatient case cost	\$744.35	\$883.00
Increase over 1973	8.0%	11.0%
Admissions/1,000 pop.	155	155
Outpatient visits/1,000 pop.	865.7	890.0
Occupancy rate	77.5%	75.0%
Beds/1,000 pop.	4.3	4.3
Length of patient stay	7.8 days	7.8 days
Personnel per inpatient	2.68	2.68
Per capita income spent on hospital care	2.5%	2.5%

paid in behalf of Medicare and Medicaid patients. Federal controls, either in use or in development stage, include regulations on health provider expansion; controls on patient admissions, length of stay and services provided; requirements to provide a certain percentage of free care; and a reimbursement policy that pays hospitals only a portion of the costs they incur treating Medicare and Medicaid patients.

It is difficult to condense the hospital cost and control debate into a few sentences except to say that federal solutions to the hospital cost issue have clearly tended to compound the problem by adding to the institutions' cost of doing business. Also, the federal government's refusal to pay hospitals their full costs has required the institutions to raise their prices for private patients in order to subsidize the government programs, literally turning hospitals into tax collectors.

Meanwhile, the debate over national health insurance continues, and the Bicentennial year should provide many opportunities for rhetoric. In the realms of debate and public hearings that have taken place in recent years, one group—the most important—has not made itself heard. While politicians, health care providers, bureaucrats, unions, third-party payors and professional consumer groups have expressed many views on national health insurance proposals, the public who will pay the bills and receive the

benefits has remained silent. No one is quite sure what percent of the gross national product (or of a family's income) the public is willing to spend for health care services. There may be a clue in a recent Louis Harris survey in which two-thirds of those questioned said they were unwilling to pay 10-15% more for hospital care, even if guaranteed better quality service and more personal attention. At the same time, 70% gave hospitals good marks on the job they were doing caring for patients. Hospital officials are beginning to talk about the "era of limitations" caused by financial restraints.

PREVENTIVE MEDICINE

The prevention of disease and accidents is still another side of today's health care story that holds promise for controlling health care costs in the future. The goal of the program is simple: If you're well, learn what to do to stay that way and eliminate known health hazards from your life. Information and education alone, however, are not enough. Somehow the public must also be motivated to give up smoking, overeating, underexercising, driving while drinking, and must learn to value their personal health and that of their families. Hospitals and other health care providers and third-party payors are working for consumer education programs that would determine how to increase personal responsibility for health.

HEALTH CARE MILESTONES

1792—Dr. Elijah Tisdale, sent to Fort Vincennes by President George Washington, became the first resident physician in the territory that was to become Indiana.

1842—The first operation using ether anes-

thesia was performed at Massachusetts General Hospital, Boston.

1843—Indiana's first medical school opened in La Porte.

1860-1890—Development of antiseptic surgery (by Joseph Lister), then called aseptic surgery.

1866—Indianapolis City Hospital (now Wishard Memorial) became the first general hospital in the state.

1879—The Indiana State Board of Health was proposed in the state legislature, and legislation was enacted the following session.

1883—Indiana's first nursing school was opened by Indianapolis City Hospital, ten years after America's first in New York City.

1903—Indiana University School of Medicine was opened, fourth in the U. S. to require at least two years or more of collegiate work for admission.

1922—Founding of the Indiana Hospital Association.

1929—Founding of the Baylor Plan, predecessor of the Blue Cross Plan.

1946—Federal Congress passed the Hill-Burton Hospital Construction Act, providing federal funds for development of community hospitals and services.

1960—Indiana hospitals initiated the nation's first Hospital Rate Review Program, to voluntarily control hospital prices.

1966—Medicare was enacted by Congress.

1971—The Indiana General Assembly authorized legislation for the Indiana Statewide Medical Education System, an innovative program designed to utilize regional campuses in addition to the Medical Center in Indianapolis. Since the plan was developed, Indiana University has become the largest medical school in the nation.

Yankee Peddlers and Specialty Stores: Vignettes of Changes in Retailing

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Prior to the middle of the nineteenth century, the dominant retailing institution in Indiana was the Yankee peddler. He visited individual farms and small settlements with his wares carried on his back or on a mule. His assortment of merchandise was odd and his product guarantees less than adequate. However, he was generally welcomed as a source of news and entertainment as well as a source of products. Most important, he existed and flourished by serving the needs of people who lived in sparsely settled locations where the existence of retail stores was not yet possible.

As small population centers developed, general stores became the dominant form of retailing. The term "general" provides the key description of these institutions. They offered a variety of merchandise designed to serve just about all of a community's needs—food, hardware, dry goods, farm supplies, candy, patent medicines and other medicinal products (for snake bites only) and furniture. The furniture line often included caskets and many general stores also were the community's funeral parlor.

Most sales were on credit with payment made (if at all) in conjunction with the sale of crops and animals. Some merchants became wealthy. Others made a sparse living as they saw the feeding of families in the hardest of

times as one of their obligations. It is interesting to note that in rural Indiana general stores still exist. Some are products of the modern merchandising of nostalgia. Some cling to long and perhaps untimely tradition.

As population centers developed, single stores became possible and developed rapidly. They specialized in some element of the general merchant's line, for example, groceries, goods, hardware, furniture or drugs. Today single line and specialty stores continue to dominate national and Indiana retailing, at least in terms of numbers of stores.

MAJOR DEVELOPMENTS SINCE 1900

Most major retail strategy developments occurred after 1900. Changes were evolutionary rather than abrupt, however, and many present-day firms were established, in one form or another, well before that date.

The Department Store

The traditional department store has been one of the most successful corporate strategies in the Western world. It is an old and mature strategy, yet year after year it weathers com-

tive and economic storms while producing lean balance sheets and enviable profit and loss statements. Many department stores claim establishment dates prior to 1900. They were typically established as dry goods or ready-to-wear outlets and grew by adding product lines and store space.

One of the oldest department store organizations in the United States was founded in Indiana. Adam Gimbels worked several years as a Yankee peddler selling dry goods in backwoods settlements along the Mississippi River. In 1843, he settled in Vincennes, Indiana, and opened his first store, the "Palace of Trade." From that Vincennes beginning grew Gimbels in Milwaukee (1887), Gimbels in Philadelphia (1894), Gimbels in New York (1910), Saks Fifth Avenue (acquired in 1923), and Gimbels in Pittsburgh (1926).

The two largest and best known department stores in Indiana are L. S. Ayres and Co., Inc., and the William H. Block Co., both of Indianapolis. Block's was founded in 1896 by William H. Block. Ayres began in 1872 when Lyman Ayres purchased controlling interest in the Trade Palace, a "dry and fancy goods emporium." Both stores followed traditional department store development patterns with major retail facilities located in the central city. However, during the late 1950s and 1960s there was considerable geographic expansion. Block's opened five stores in Indianapolis suburban shopping centers as well as stores in Lafayette, Kokomo and Bloomington. Ayres followed a similar strategy consistent with the reduced importance (nationwide) of the central city as the prime retail location.

Also, both Ayres and Block's followed the pattern of most large local department store organizations. The William H. Block Company was sold to Allied Stores Corp., and Ayres was sold to Associated Dry Goods Corp., both headquartered in New York. Indeed, throughout the United States, the large locally owned department store is nearly a thing of the past. Relatively few major independents remain.

The Chain Store Concept

Several retail chains were established in the late 1800s, but the major period of chain store growth nationally occurred between 1910 and 1929. Early development was dominated by food, variety, drug and apparel organizations. Many Indiana firms were pioneers and the state itself played a major role with its landmark chain store tax law.

Meyer Bros. Drug Co., a retail drug chain founded in 1852 in Fort Wayne, was among the first chain organizations in the United States. The first Sears, Roebuck and Co. store was opened in Evansville, Indiana, on October 5, 1925. The few stores that Sears operated prior to that were warehouse operations in the original mail order business. In the retail drug field, both the Haag Drug Co., Inc., and Hook Drugs, Inc., established major Indiana-based chains. Haag's is presently celebrating its centennial year, having been founded in 1876. Hook's, established in 1900, operates 200 stores. They are all located in Indiana, operating in seventy of Indiana's ninety-two counties.

In the variety store field, a pioneer chain was the Morris Stores, founded in 1903 in Bluffton and later acquired by G. C. Murphy. Danners, Inc., is an important Indiana-based chain in the variety store area. In recent years Danners has concentrated on developing its discount department store division. This has also been a pioneer effort with respect to a strategy of locating in secondary markets (in communities of relatively small size).

One of the earliest grocery chains, Standard Grocery Company, was founded in Indianapolis in 1897 by Lafayette Jackson. In addition, Jackson was the first retailer to challenge the 1929 Indiana chain store tax law. In the mid-1920s, independent retail and wholesale grocery firms throughout the nation began lobbying strongly for the passage of legislation designed to curtail what they termed the "chain store menace." As a result, several state legislatures passed laws differentially taxing chain

Key Measures of Indiana Retailing, 1929-1972

<i>Measures of Indiana Retailing Activity</i>	<i>1929</i>	<i>1954</i>	<i>1972</i>
Number of Retail Outlets	41,618	41,624	47,317
Total Sales (Thousands)	\$1,222,384	\$4,512,676	\$11,467,787
Number of Employees	118,561	195,974	291,242
Total Payroll (Thousands)	\$125,966	\$497,623	\$1,352,895

SOURCES: U. S. Department of Commerce, Bureau of Census, Census of Business, *Retail Distribution*, 1935, vol. III, p. 82. *Retail Trade—Area Statistics*, 1954, vol. II, *Retail Trade—Area Statistics*, 1972, vol. RC72C15.

store outlets, usually in the form of a progressive tax based on the number of stores in a chain. In 1929 the Indiana legislature passed such a law, but one designed to avoid certain constitutional flaws contained in the versions of other states.

Lafayette Jackson owned a chain of 225 grocery outlets, all operating in Indianapolis. Had each store been owned by an individual the total store tax would have been \$625. However, since all stores were owned by Jackson, the progressive store tax in the Indiana law produced a tax bill of \$5,443. Jackson contested the law, but in 1931 it was upheld by the U. S. Supreme Court. Thus, the Indiana law subsequently served as a model for similar legislation passed by several states.¹

Supermarket and Discount Retailing

Supermarket methods of retail merchandising began in the grocery trade during the Great Depression and generally permeated food retailing by the early 1950s. One of the most

interesting aspects of supermarket merchandising has been the extension of this operational concept to the distribution of nonfood items in discount retailing.

Discount retailers began appearing in the early 1950s. However, during the decade of the sixties, the number of discounters grew at a tremendous rate. The major impetus for this growth was the development of the discount department store and the super unit drug store. Three Indiana retailers were major pioneers in this area. L. S. Ayres & Co., Inc., founded Ayr-Way, its discount department store operation, in 1962. In doing so, Ayres became the first major department store organization in the United States to diversify into the discount store business. This was a major departure for Ayres' top management encountered less than subtle hostility from their colleagues in other department store organizations. However, success is a great silencer and many followed suit. Thus, the innovation required not only considerable market insight, it took a fair amount of guts.

Likewise, Haag Drug Co., Inc., and H. B. Drugs, Inc., were major pioneers in extending the supermarket merchandising concept to discount retailing. Both firms (although pursuing quite different strategies) were important innova-

1. Much of the discussion of chain store development was taken from Godfrey M. Lebhör, *Chain Stores in America*, 3rd ed. (New York: Chain Store Publishing Corp., 1963), pp. 25-155.

in the development of the super unit drug store. The merchandising concept involved major emphasis on low price, considerable increase in store size, substantial emphasis on items of general merchandise not traditionally in drug store assortments, and self-service organizations. Many firms have followed suit and the super unit concept increasingly dominates drug store retailing.

MAGNITUDE OF INDIANA RETAILING

Quantitative data available to describe the size of Indiana retailing are of relatively recentintage. The first census of business that included distributive organizations was done in 1929. The accompanying table contrasts measures of Indiana retailing in 1929 with results of

the 1972 census of business. (Results from the 1954 census are included as a benchmark.)

Perhaps the most interesting aspect of the data is the relative lack of growth in the *number* of retail establishments in the state. Specifically, the number of retail establishments in Indiana has grown by only 12% while total retail sales (unadjusted for inflation) have increased nearly 10 times. The obvious conclusions are that today's average store size is much larger and, due to mobility, fewer outlets are required relative to population size.

It is also clear that sales per employee have grown dramatically. Since 1929, employment in Indiana retailing has grown 2.5 times while supporting a sales volume increase of nearly 10 times. The situation reflects a combination of inflation, larger store sizes and widespread use of the self-service concept.

From Statehood to the Seventies

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- 1816—Indiana admitted to the Union December 11.
- 1817—Bank of Vincennes became official State Bank of Indiana.
- 1818—"New Purchase" increased the size of Indiana by about eight million acres.
- 1819—Work began on a canal to join New Albany to the Ohio River.
- 1820—Indiana University founded.
- 1821—City of Indianapolis established.
- 1822—Yellow fever, ague, malaria and milk-sickness swept the state.
- 1823—Allen County laid out by the General Assembly.
- 1824—System of township schools established.

- 1825—Robert Owen attempted to establish a "perfect community" at New Harmony.
- 1827—Survey of the trail which would become the National Road.
- 1829—John Scott established *Pottawattomie and Miami Times* newspaper at Logansport.
- 1830—Governor James Ray called for a railway to connect Lake Michigan to the Ohio River via Indiana.
- 1831—The state appropriated \$75,000 for work on the National Road.
- 1832—Black Hawk's War, the last Indian uprising in Indiana, fought.
- 1833—General Assembly ordered survey of land for the Whitewater Canal.
- 1834—Second State Bank of Indiana chartered.

1835—State Board of Agriculture created.

1836—Governor Noah Noble signed the Internal Improvement Bill, carrying appropriations of \$13 million.

1837—Second State Bank weathered the Panic of 1837.

1838—Pottawattomie and Miami Indians, the last two great tribes, expelled from Indiana.

1839—State of Indiana, due to mismanagement of funds for internal improvement, went bankrupt.

1840—Legislature authorized the issuance of state scrip in an attempt to salvage the state's economy.

1842—Legislature reorganized electoral districts.

1843—Wabash and Erie Canal opened between Lafayette and Toledo, Ohio.

1844—Democrats scored sweeping successes in the elections of 1844.

1846—Wabash and Erie Canal transferred to creditors of the state for liquidation of debts.

1847—Madison and Indianapolis railroad reached Indianapolis.

1848—State authorized private companies to convert public roads into plank-covered toll roads.

1849—Law authorizing a direct and general tax levy for the support of public schools passed.

1850—Convention met to frame a new state constitution.

1851—New state constitution went into effect on November 1.

1852—First Indiana State Fair held in Indianapolis.

1853—Indianapolis and Lawrenceburg railroad joined Indianapolis and Cincinnati.

1854—People's Party organized in Indiana.

1855—Indiana Supreme Court struck down law prohibiting Negroes from settling in the state.

1856—Oliver Morton organized the Republican Party in Indiana.

1857—Political fighting in Indiana caused the 1857 assembly to adjourn without passing a revenue or appropriation bill.

1859—Newton County added to bring the number of counties in Indiana to its present ninety-two.

1860—Indiana ranked sixth among the states in population, with 1,350,000.

1861—The Fourteenth Indiana Regiment participated in the battle of Philippi, Virginia, the first inland battle of the Civil War.

1862—Ambrose Burnside, a native of Liberty, Indiana, was named Commander of the Army of the Potomac.

1863—Confederate forces under John Morgan raided southern Indiana.

1864—Indiana supported Abraham Lincoln in the national elections.

1865—Thirteenth Amendment, outlawing slavery, ratified by the Indiana General Assembly.

1867—Iron furnaces built in Clay County.

1868—Indiana Congressman Schuyler C. Phelps elected vice-president.

1869—General Assembly ratified the Fifteenth Amendment.

1870—State population reached 1,680,637.

1871—U. S. Quartermaster's Depot established at Jeffersonville.

1872—State Grange of Indiana organized.

1873—Panic of 1873 disrupted Indiana business and farms.

1874—Purdue University opened.

1875—Civil War veterans formed "Monumental Association" to raise money for the Soldier's Monument in Indianapolis.

1876—Strikers of the Baltimore and Ohio Railroad disrupted rail service at Vincennes.

1877—Indiana State Militia reorganized.

1878—Indiana Militia sent to Coal Creek to quell labor disturbances.

1879—Drought in Europe led to economic restriction of Indiana farmers.

1880—Lew Wallace, Indiana native, wrote *Hurricane*.

1883—Indiana railroads changed from sun to standard times, causing much protest from Indiana farmers.

1884—Recovery of European farmers led to depression for Indiana farmers.

1885—State legislature restricted employment of children under twelve.

1886—Natural gas boom in Indiana.

1887—Mineral water found at Martinsville.

1888—Benjamin Harrison, senator from Indiana, elected president.

1889—An electric railway started at Lafayette.

1890—Populist Party of Indiana formed.

1891—Governor Alvin Hovey died while in office.

1892—Race track opened at state fair grounds.

1893—Union membership declared legal by state.

1894—Elwood Haynes made automobile at Kokomo.

1895—Indiana Militia became the Indiana National Guard.

1896—Republican victories ended twenty years of balanced political power in Indiana.

1897—School attendance made compulsory in Indiana.

1898—First Indiana troops mustered for war in Spain.

1900—First interurban rail line opened in Indianapolis.

1902—John Herron Art Institute opened.
 1904—Interurban Union Station at Indianapolis opened.
 1905—State Railroad Commission established.
 1907—Indiana Civil Service reforms passed.
 1908—County option liquor law passed by legislature.
 1909—State Board of Accounts organized.
 1910—Department of Electrical Engineering, Purdue University, started experimental radio broadcast.
 1911—James Whitcomb Riley gave present site of public library to Indianapolis.
 1913—Wabash Valley floods killed sixty people, estimated damage was \$12 million.
 1914—Passenger car licenses issued to 66,410.
 1915—Direct Primary Law enacted by legislature.
 1916—Indiana celebrated its statehood Centennial.
 1917—State Highway Commission founded.
 1918—Ball State Teacher's College opened.
 1919—Indiana Conservation Department established.
 1920—Twentieth Amendment ratified by the legislature.
 1921—Depression of 1921 left many in Indiana unemployed.
 1922—Indianapolis Police Department wracked by scandal.
 1924—Governor convicted of using the mails to defraud.
 1925—Grand Dragon of the Indiana Ku Klux Klan convicted of murder.
 1926—Mayor of Indianapolis sentenced for accepting bribes.
 1927—Construction in Indiana declined 15%, prefiging the coming Depression.
 1928—Indiana banks reported deposits of \$333,441,000.
 1929—Steel became the leading industry in the state.
 1931—Indiana livestock producers and marketers hit hard by the depression.
 1932—National Guard sent to Terre Haute to quell labor disturbances.
 1933—Gross Income Tax law enacted.
 1934—State adopted welfare and pension legislation.
 1938—Ninety-four indicted for primary election fraud.
 1939—First television in Indiana shown by Philco dealers at Indianapolis.
 1940—Wendell Willkie, Indiana native, defeated at attempt for presidency.
 1941—Merit system established for nonpolitical state employees.

1942—Indiana steel companies received war contracts, leading to a revitalization of the industry.
 1943—County Agricultural Production Boards established.
 1944—Indiana supported Thomas Dewey in the presidential election.
 1945—State Department of Commerce established.
 1947—Indiana Department of Revenue established.
 1949—First commercial television station in the state, WFBM, went on the air.
 1950—State budget rose to \$546.9 million.
 1951—State tax system reorganized.
 1952—Eisenhower carried Indiana in the presidential election.
 1953—Commission on State Tax and Financing Policy created.
 1955—Public Employees Pension System integrated with federal social security system.
 1956—Indiana Toll Road opened to traffic.
 1957—Right-to-Work Law passed by legislature.
 1958—Indiana businesses show minor recovery from recession of the 1950s.
 1959—Indiana School Reorganization Act passed.
 1960—Indiana population exceeded 4.5 million.
 1962—Birch Bayh unseated U. S. Senator Homer Capehart in 1962 elections.
 1963—Propane gas explosion at Indiana State Fair Coliseum killed 74.
 1964—Lyndon Johnson became the first Democratic presidential candidate to carry Indiana since 1948.
 1965—Palm Sunday tornadoes killed 140, estimated damage totaled \$125 million.
 1966—Indiana reapportionment plan struck down by the U. S. Supreme Court.
 1967—Indiana astronaut Virgil Grissom killed in fire at Cape Kennedy.
 1968—More than forty killed in explosion at Richmond, leading to federal legislation on storage of gunpowder.
 1969—Small plane and jetliner collided over Shelby County, killing eighty-three.
 1970—Vance Hartke narrowly defeated Richard Roudebush in 1970 Senate election.
 1971—Indianapolis Public School System found guilty of segregation by Federal Judge S. Hugh Dillin.
 1972—More than 2,000 teachers in the Indianapolis Public School System struck for five days.
 1973—Six hundred inmates involved in disturbances at the Indiana State Prison.
 1974—Fourteen tornadoes on April 3 killed forty-eight and injured more than 1,000.
 1975—Judge S. Hugh Dillin ordered busing in Marion County.
 1976—Indiana University basketball team won NCAA championship.

Mineral Resources in Indiana's Economic Development

JOHN B. PATTON

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In 1837 the Indiana legislature passed "An Act to provide for a Geological Survey of Indiana," and David Dale Owen, M. D., of New Harmony was appointed geologist of the state of Indiana. In the introduction to the resulting report, which was published in 1839, Dr. Owen said

Even the imperfect survey which time has yet permitted, has amply established the fact, that our citizens often unconsciously tread over hidden stores of mineral riches, which, when the researches of science shall have brought to light, the enterprise of this age of improvement will quickly seize upon, increasing at once the fortunes of individuals and the resources of the state.

The nation's Bicentennial anniversary is an appropriate time to review the effect that Indiana's nonrenewable materials—the mineral resources—had on the state's economic development during the 137 years since the Owen report was issued.

Such Indiana community names as Asphaltum, Cannelton, Carbon, Coal City, Gas City, Ironton, Limesdale, Oil Creek, Petroleum and Sulphur attest to the importance that some founding groups attached to local mineral occurrences. For the most part, however, mineral production has had greater impact on the nearby larger towns and county seats than on the settlements named for the mineral discoveries.

Minerals are commonly classified as *fuels*, *ores* (from which metals are recovered) and *industrial minerals*. Indiana has produced sub-

stantial amounts of the fossil fuels coal, oil and natural gas. Except for small amounts of ore recovered at various localities during nineteenth century, metalliferous deposits of commercial value have not been found. Production of industrial minerals has been largely principally as building stone, crushed stone, sand and gravel, clay and shale, gypsum, and raw materials for portland cement. Indiana's mineral economy, therefore, has not been as diverse, but the amounts produced, and their value, have been impressive.

In 1975, according to the United States Bureau of Mines, Indiana's total mineral production was valued at \$475 million, which exceeded the value of mineral production in a number of the western states that are commonly associated in the public mind with minerals and mining. In 1973, which is the year for which full data are available, among the states, Indiana ranked 24th in the value of mineral production.

When we consider that Indiana is the smallest state west of the Appalachians, we must conclude that it has been well endowed with nonrenewable materials, or at least with those that are especially valuable in the western economy. In 1973, Indiana ranked 18th in the value of mineral production per square mile. On the average, each of Indiana's 36,000 square miles yielded nearly \$10,000, which exceeded the per-square-mile yield of s

stable minerals-producing states as Colorado, Nevada, Utah, Wyoming, Alaska and Idaho.

Manufacturing and agriculture are more important to Indiana's economy than mineral sources, so that the value of annual minerals production tends to be lost among much larger figures. According to the Indiana State Chamber of Commerce, 40.1% of Indiana's gross product for 1974 came from manufacturing, 33% from agriculture and only 0.5% from the mining and mineral industries.

PLACE VALUE

Some minerals have what is termed *place value*, which refers to the fact that the likelihood of their development is dependent in considerable part on *where* they are, in relation to population and industrial use, rather than on their richness or the quality or size of the deposits. An example would be mineral resources that are used in huge volume and must be available at low unit cost if they are to be used, such as in the case of the mineral aggregates crushed stone and sand and gravel. Transportation doubles and triples their cost to the consumer at relatively short distances.

Some other materials used in large amounts for construction have place value of a different sort: regional sources are developed to serve urban areas which do not have local supplies. Gypsum and cement typify these materials. The southern Indiana gypsum mines and processing plants are developed only because of their strategic market advantages. Deposits of equal quality and size, or even better ones, in a sparsely populated part of the country would not be considered for exploitation. Another example is cement, which is manufactured where the principal ingredients are available in huge volume and where the regional, rather than the local, market is adequate, or where some such factor as low-cost water transport to a potential marketing area justifies development of large productive capacity.

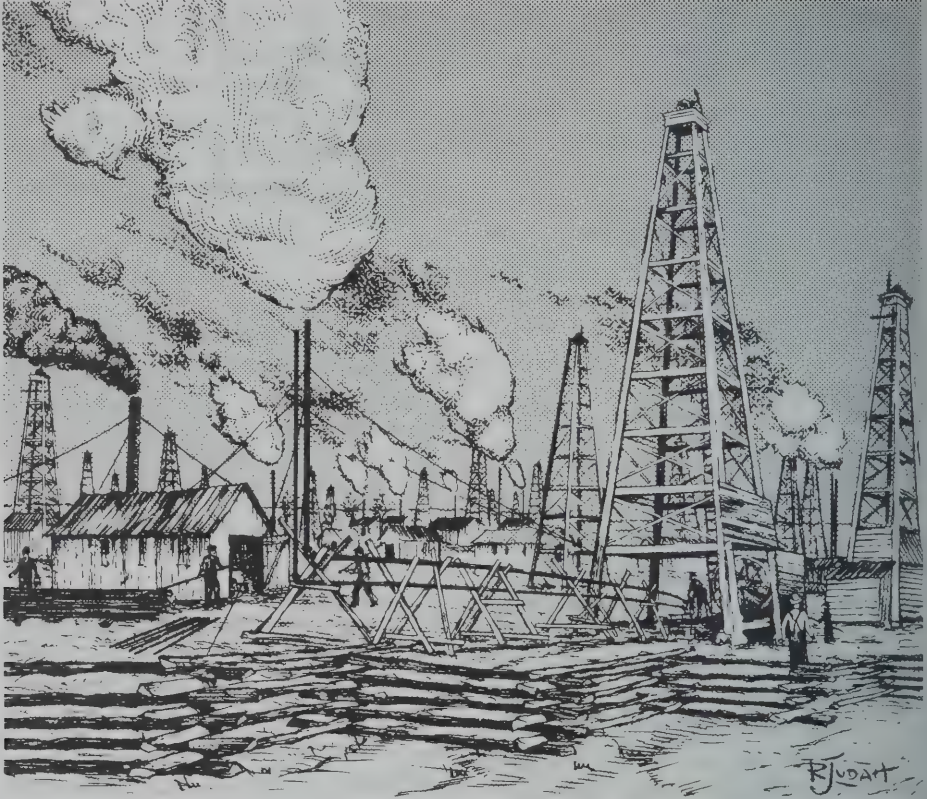
The fossil fuels do *not* have high place value; to express the situation positively, they are worth developing and producing wherever accessible accumulations of sufficient quality and quantity exist. Most of the earth's major oil production is in localities which do not use large amounts of the fuel, but oil is transportable over long distances by pipeline and tanker. Similarly, coal can be and is transported long distances, and even between continents. Ore deposits are also developed almost regardless of location if some combination of quantity, quality, minability, and amenability to treatment make exploitation feasible.

COAL AND GAS DISCOVERIES

Two of Indiana's mineral resources, coal and natural gas, had a significant positive effect on the development of the state's economy because of the *time* at which they were discovered and developed. The effect of similar discoveries now or in the future would probably be less, although new factors that are imposed upon the minerals field from time to time make forecasting hazardous. We might contemplate the impact that a major new discovery of natural gas would have had in Indiana during the recent and present period in which the wellhead price for gas that is to go into interstate shipment has been regulated but the price of gas for intrastate use has not.

Coal was produced in southwestern Indiana in the very early days of settlement. Outcrops of coal were noted on land survey maps in 1804, and it is reported that Robert Fulton took coal aboard his steamboat *Orleans* in 1812 from a small mine that had been opened in 1811 at Fulton, in Perry County. The first coal company to be officially incorporated and granted a charter by the state was the American Cannel Coal Company which, in 1837, began mining coal at Coal Haven (now Cannelton) in Perry County.

The Trenton Field: Scene of Indiana's First Big Boom



Energy for industry during the latter half of the nineteenth century was supplied largely by steam, which was raised through the combustion of coal. In addition to needing mechanical power, many industrial processes required heat treating, and this also was provided largely by coal as a fuel. Without doubt, many of the industries founded during this period in west-central and southwestern Indiana, and for some distance eastward and northward, were sited in considerable part due to the availability of low-cost bituminous coal. The age of mechanical steam power was overlapped and ultimately succeeded by the age of electrical power generated by coal-fired steam plants. With the spread of electric utilities networks, electrical rates in various localities came to depend less and less on the proximity of the coal supply, and the availability of local coal ceased to have appre-

ciable effect on the development of new industry, except for the generating stations themselves (and even to them water supply has come to be as important as fuel supply in selecting a site).

Discovery of natural gas in 1886 in what was to become the famed Trenton Field in northwestern Ohio and northeast-central Indiana triggered an industrial expansion that transformed sleepy county seat towns throughout the area into manufacturing centers that are still vital parts of Indiana's (and Ohio's) economy, although the nature of the manufacturing has changed and is no longer based on the availability of local gas. The field was discovered before the advent of long-distance pipelines, and industries that could benefit from natural gas in large volume and at low cost—many communities offered it free—moved to the source.

Glass manufacturers were among the most anxious to locate near the gas fields. Countless other industries that depended upon heat in their processes joined the rush. Foundries, wire mills, metal-fabricating plants, and others joined the throng. With them came service industries, construction firms, transportation systems, and the retail businesses that supplied the workers who lived in the houses and worked in the factories—and the boom was on!

The gas supply itself was short lived, but the industrial and commercial enterprises that it brought took root. The region is still a center of mass manufacture, although neither the raw materials nor the fuel are of local derivation. Some industries changed hands, some switched to different products, and some did both, but industrialization and the commercial activities that accompany industrialization remain.

TWO OIL BOOMS

Crude oil was discovered in the Trenton Field in 1889, but that development did not have the impact of the gas boom. Neither did the discovery, in the same year, of oil at Terre Haute. Development (drilling and well completion) of an oil-producing region always brings local prosperity of a sort, in housing and retail business, but it is ephemeral, and the crude oil from most localities is refined elsewhere. The state's second oil boom began in the late 1930s in the southwestern counties, and its effect has been somewhat more sustained, in considerable part because secondary recovery methods have permitted a substantially higher percentage of the oil in place to be produced. Oil production declined from more than 12 million barrels per year in 1962 to less than 5 million barrels in 1975, but the active years have left most of the affected communities at a higher level of development than they probably would have achieved without the decades of oil production and its related enterprises.

INDUSTRIAL MINERALS

The industrial minerals used principally in construction are difficult to categorize from the viewpoint of economic development. Rarely, for instance, could we say that new industry came into a region *because* aggregates in the form of crushed stone or sand and gravel were good and plentiful, but the construction that typifies development—buildings, paving, airports, highways, and a variety of public works—requires these materials, and their local availability, with consequent relatively low prices, is an encouragement that cannot be quantified. The widespread availability of clays and shales suitable for the manufacture of brick and tile did not in itself attract other new development. However, it can be said that construction was of higher quality than it would otherwise have been, and heightened aesthetic values increased the attractiveness of the regions, which enticed additional investment. We should remember that Indiana was settled from south to north, and note that the Ohio River region is especially rich in historic structures that used local building materials.

Sandstone and Limestone. The availability of native building stone strongly affected regional construction in the nineteenth century, but that effect has been less in the twentieth. Many localities in Indiana have produced dimension sandstone and limestone, but in only two has the impact on the state's economy been significant. In southeastern Indiana, in an area extending roughly from Shelby and Rush counties on the north to Jefferson County, Silurian limestones were taken up in their natural bedding thickness. The Mississippian limestone produced so extensively in the Bedford-Bloomington region has come to be known nationally and internationally as "Indiana Limestone." The Silurian rocks are no longer produced in significant amounts for building stone, but Monroe and Lawrence counties still produce most of the building limestone used in the United States. In recent years, 80-95% of

Indiana's annual building stone production has been shipped outside the state.

Portland Cement. Portland cement has been termed one of the most sensitive indicators of the economy, registering as it does the tempo of construction. Indiana has a long history of cement manufacture. The four cement plants in Clark, Lawrence, Putnam and Cass counties are in those locations because their principal raw material—limestone of relatively high calcium content—is present. The fifth and largest plant is on the south shore of Lake Michigan and utilizes blast furnace slag as the main ingredient. The location of this plant is thus also based on availability of a raw material, but in this case not on Indiana mineral resources, as even the auxiliary materials are brought in principally by Great Lakes freighters.

Gypsum. The newest addition to Indiana's industrial minerals family is gypsum, which was first produced in the state in the 1950s. The effect on the local economy was enormous, as the region, Martin County, was at very low ebb economically. The United States Navy's installation at Crane had removed a substantial part of the land in the county from the tax rolls, and the only major local employer had ceased operations following a fire that destroyed the plant. The impact of gypsum mining and gypsum product manufacture was not high in relation to the total economy of the state, but in addition to the dollar revenue, the employment and the accessory business activities, a nearer source of a material so essential to construction must have had a favorable effect upon building costs.

TECHNOLOGIC DEVELOPMENTS

Mineral industries have been good for Indiana, and it can also be said that Indiana has contributed to the mineral industries. The Ayrshire Collieries Corp., the Enos Coal Mining Co., the Maumee Collieries and the Sherwood

Templeton Coal Co. (all now absorbed in larger companies) played a major role in developing technologies and equipment currently used in the flatland type of strip mining conducted in the Midwest. These companies, working with manufacturers of heavy equipment, developed the large draglines, or their forerunners, that are now active from east Ohio to Missouri. Maumee Collieries alone can be credited with more than thirty innovations that pioneered the era of large-scale surface mining. New methods of drilling blast holes, new explosives and new methods of blasting originated with that company.

Reclamation practices in much of Indiana strip-coal terrane prior to governmental regulation were better than in certain other states after the imposition of regulations. Reformation of strip-mined lands was undertaken voluntarily in Indiana as early as 1918. Member companies of the Indiana Coal Products Assoc., in conjunction with members of the Indiana State Farm Bureau and the Indiana Department of Conservation, developed the first industry-sponsored reclamation law in the country in 1941. In the field of building stone companies in the Bedford-Bloomington district pioneered both quarrying methods and mill procedures that were ultimately applied in other states, in other countries, and on other continents.

IMPACT OF MINERALS

In summary, we could say that the availability of certain nonrenewable resources has had considerable impact, but has not been the prime factor in Indiana's economic development during the years since the pioneer period. Nearly as vital as the existence of mineral resources has been the timing of their discovery and development. In a manner somewhat analogous to the situation of Great Britain during the industrial revolution, Indiana has had certain critical mineral resources available at the time they were needed, and this factor of chronology

ly has, in strategic terms, outweighed their volume and dollar value. The high level of agricultural and manufacturing productivity in the state obscures the fact that Indiana has had and continues to have mineral production that could dominate the economy in less developed regions.

Mineral resources will continue to be significant in the economy of the state. Oil production will continue to decline and gas production will remain negligible unless major new reserves are discovered, which is an unknown factor. Coal production should both increase and have enhanced impact as other fossil fuels become more scarce and higher in price. If United States coal production doubles during the coming decade, as is advocated in some circles,

Indiana's 17.5 billion tons of recoverable coal should supply the energy for, and attract, extensive development. Indiana's industrial minerals have a built-in security system. As most of them are valuable and developed because they sit in the middle of a populous and industrialized part of the country, they should remain valuable and should experience expanded development keyed to any population increase or growth of industry and trade. The geologic environment of Indiana is not one that encourages expectations of startling new mineral discoveries, but the same thing could have been said (the geology has not changed) before the Trenton gas boom, before the two episodes of substantial oil production, and before the gypsum developments of the 1950s.

NOTE: The accompanying article is focused on the role of metals and minerals in the development of the state of Indiana. A discussion of Indiana's material resource base would not be complete, however, without recognition of the vital role played by Indiana's rich agricultural land, especially in the middle two-thirds of the state.

Even before 1776, settlers were moving into the territory that later became Indiana, clearing forests and planting crops, notably corn which the Indians themselves had long since learned to cultivate. By 1816, when Indiana became a state, hardwood timber was becoming an important commercial product. The lumber industry remained a major industry for about a century, though it peaked in 1899 when over a billion board feet were produced. The production of lumber attracted other industries to the state, including the furniture industry which thrived on the plentiful supplies of hardwoods. After 1899, timbering declined as more and more land was put under cultivation and gradually many of the furniture factories went out of business or moved to other, less depleted areas.

In the meantime, however, farm output was rising steadily. Farming continues to be a major industry, even though only about 3.5% of total labor and proprietor's income in Indiana is earned in farming as such.¹ But agriculture has been the base for many industries not classified as farming, including transportation and processing of agricultural products, farm machinery manufacturing, and the many service industries that assist farmers as well as nonfarmers. Thus we should recognize that, although diminishing in importance relative to manufacturing, construction, wholesale and retail trade, finance and other nonfarm industries including government, Indiana's agricultural land resources have made a major contribution to the economic development of the state and the nation.

1. Total labor and proprietor's income includes wages and salaries, other labor income (fringe benefits), and income of self-employed proprietors such as farmers, doctors and lawyers. It excludes income from investments and transfer payments such as social security benefits. The 3.5% figure is for 1974; the 1975 figure, not yet available, will probably be somewhat higher. Source: U. S. Department of Commerce, *Survey of Current Business*, August 1975, Table 16-21, p. 15.

A Perspective on Population

ROBERT A. CALHOUN AND MORTON J. MARCUS

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When Thomas Jefferson, John Adams and others labored in the heat of that Philadelphia summer of 1776, they sought liberty for fewer persons than the current number of Indiana residents. Twenty-five years later, when Jefferson succeeded Adams as president of the still struggling nation, the population of *all* the United States was approximately equal to the 5.3 million persons who now call themselves Hoosiers. Today's 5.3 million are the spiritual and economic, if not biological, heirs of 2,500 people contesting the Indiana wilderness at the dawn of the nineteenth century. The "manifest destiny" of the nation would lead millions across the state; many would stop for a few years, as did the Thomas Lincoln family on its way from Kentucky to a more permanent residence in Illinois. Others would skirt the state's borders as the slow-flowing Ohio River carried them west. The National Road and later Indiana's railroads were conduits of the nation's growth. Indiana, for more years than any other state, would be the geographic center of the nation's population.

We can gain a perspective on Indiana's population by looking at its growth in relation to other states of the East North Central Region and to its southern neighbor, Kentucky. Then the geographic distribution and some

specific characteristics of the Indiana population will be discussed and compared with national data.

THE GROWTH OF INDIANA

When Indiana became a state in 1816, it was the second most developed area in the present East North Central Region, which included Illinois, Indiana, Michigan, Ohio and Wisconsin. Ohio (as well as Kentucky) was settled more extensively than the Hoosier state. In the 1820 census Ohio had 73% of the regional population.

The 150-year growth pattern of Indiana's population from some 150,000 in 1820 to over 5 million in 1970 is depicted in Table 1. Over the same period, the region went from 800,000 to 40 million, and the United States from 10 million to 200 million. The growth of Kentucky for the same period was not nearly so marked.

Indiana's population reached the million mark in the 1850s, at a time when the region was approaching 5 million. It took the state thirty years to accumulate its second million. By 1880 the region had over 11 million people and the nation had passed the 50 million mark.

TABLE 1

Population of States in East North Central Region, Kentucky and the United States, Every Third Census, 1820-1970

	1820	1850	1880	1910	1940	1970
Ohio	581,000	1,980,000	3,198,000	4,767,000	6,908,000	10,653,000
Indiana	147,000	988,000	1,978,000	2,701,000	3,428,000	5,194,000
Illinois	55,000	851,000	3,078,000	5,639,000	7,897,000	11,114,000
Michigan	9,000	398,000	1,637,000	2,810,000	5,256,000	8,875,000
Wisconsin	—	305,000	1,315,000	2,334,000	3,138,000	4,418,000
Kentucky	564,000	982,000	1,649,000	2,290,000	2,846,000	3,219,000
United States	9,368,000	23,192,000	50,189,000	92,228,000	132,165,000	203,212,000

forty years later, when Indiana reached 3 million, the region was well beyond 20 million and the United States had started on its second hundred million. It took the state thirty more years for its fourth million and then less than twenty years to hit the 5 million mark. By the time Indiana passed 5 million in the late 1960s, the region was nearing the 40 million mark and the nation was rapidly approaching 200 million.

Indiana's smallest population gain since 1820 was between 1900 and 1910; its greatest was between 1950 and 1960 when the increase was almost three-quarters of a million. For each of the last three decades the increase has exceeded 500,000, though it is doubtful that this performance will be repeated for the present decade. The smallest increase for the region was between 1820 and 1830, with the 1930s taking second place. The greatest increase, almost 6 million, occurred between 1950 and 1960. The nation also had its greatest increase in this period.

Population increase in percents shows that Indiana's greatest rate of increase since 1850 was 36.6% between 1850 and 1860, while its slowest growth rate, 5.8%, was between 1930 and 1940. The region and the United States followed the same pattern.

The change from a rapidly growing to a more stabilized area is reflected in a comparison of growth rates between 1820 and 1900 with those for the next seventy years, shown in table 2. In the earlier period, Indiana's growth rate was over 1,600% as compared with an

increase of just over 100% since 1900. The region increased almost 2,000% in the eighty years prior to 1900 and some 150% since. The U. S. rate of gain between 1820 and 1900 was much less than that of the East North Central Region but was still over 700% as contrasted with the 166% figure between 1900 and 1970.

Indiana's population as a percent of the nation's and the region's population is shown in the accompanying figure. It will be noted that Indiana had 1.5% of the U. S. population in 1820, increased its share steadily for the next fifty years to 4.4%, then showed a drop for the next six decades. In the last five censuses the figure has held steady at 2.6%.

The picture for the region has been quite similar, with an increase from 8.2% in 1820 to 23.7% in 1870. By 1910 the proportion had dropped to 19.8%, and while there have been

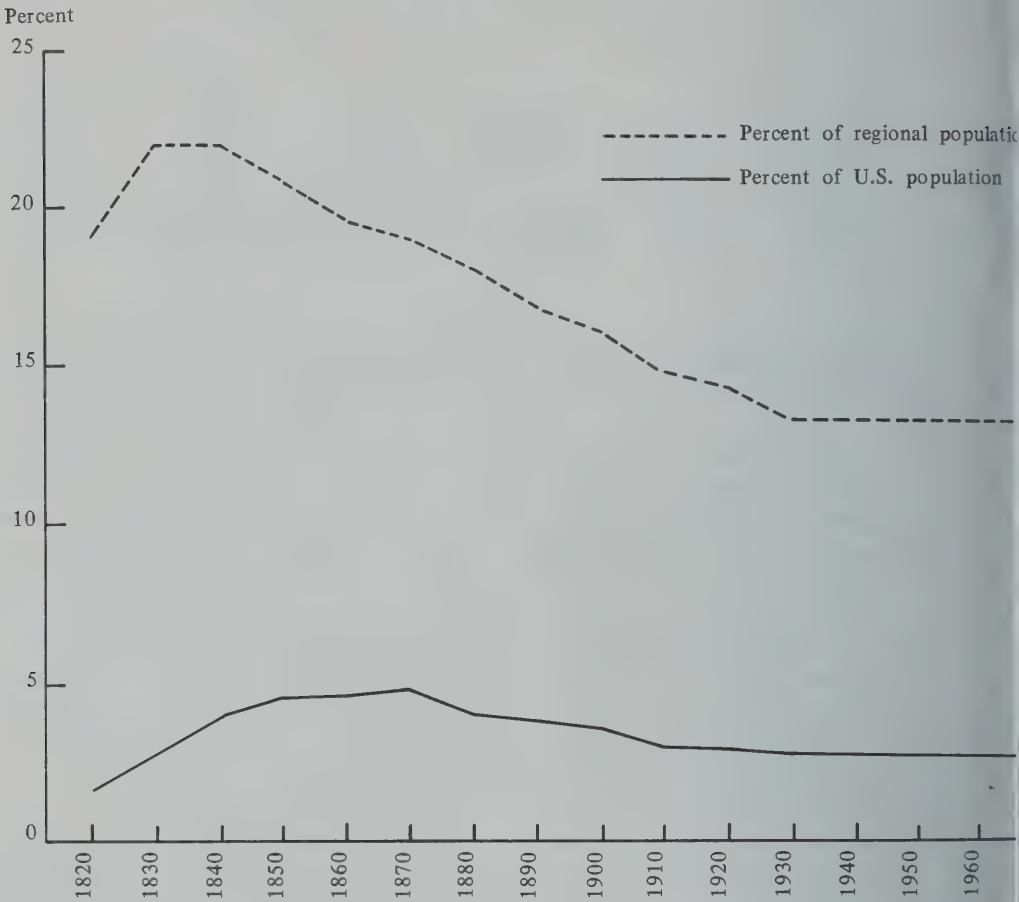
TABLE 2

Percent of Intercensal Population Change for States in East North Central Region, Kentucky and the United States, 1820-1970

	1820-1900	1900-1970
Ohio	615.1	156.2
Indiana	1,609.8	106.4
Illinois	8,633.0	130.5
Michigan	27,114.3	266.6
Wisconsin	6,586.2*	113.5
Kentucky	280.5	49.9
United States	713.5	166.6

*1840-1900

Indiana's Population as a Percent of East North Central Region Population
and the United States Population, Each Census, 1820-1970



fluctuations over the past sixty years, that is the present figure. Kentucky's share of the nation's population has dropped every decade since 1820 except during the 1930s, and over the 150-year period has declined from 5.9 to 1.6%.

In 1820 Indiana's share of the East North Central Region's population was greater than it is today. It took less than twenty years for Indiana to reach its maximum proportion (23.4%), and for the next 100 years the figure dropped consistently, reaching 12.8% in 1930. For the past forty years the population of Indiana as a percent of the region has remained the same. Michigan is the only state in the

region which has markedly increased its proportion of the total since 1900.

Since 1820 each of the five states in the East North Central Region and Kentucky has shown population increases for each interdecade period. The area and population density of each of these states for each census since 1900 is given in Table 3. Ohio has consistently had the highest population density in the region, Wisconsin the lowest. In 1900 Indiana had more persons per square mile than the region as a whole, but because of the rapid growth in Michigan this was not true in 1970 when that state had 144 persons per square mile compared with 165 for the entire area. Wisconsin

TABLE 3

Land Area and Population Density per Square Mile for States in East North Central Region and Kentucky, Each Census, 1900-1970

	<i>Land Area</i>	<i>Population Density per Square Mile</i>							
		1900	1910	1920	1930	1940	1950	1960	1970
Ohio	40,975	102.1	117.0	141.4	161.6	168.0	193.8	236.6	260.0
Indiana	36,097	70.1	74.9	81.3	89.4	94.7	108.7	128.8	143.9
Illinois	55,748	86.1	100.6	115.7	136.4	141.2	155.8	180.4	199.4
Michigan	56,817	42.1	48.9	63.8	84.9	92.2	111.7	137.7	156.2
Wisconsin	54,464	37.4	42.2	47.6	53.7	57.3	62.8	72.6	81.1
Kentucky	39,650	53.4	57.0	60.2	65.2	70.9	73.9	76.2	81.2

Ohio, as well as Indiana's southern neighbor, Kentucky, have remained well below the area figure.

Each of the states in the region has ranked high in total population since 1900. In that year, four of these five states were in the top ten most populous states in the nation, and Wisconsin ranked thirteenth. (Kentucky was twelfth.) Indiana ranked eighth in 1900, but by 1970 had dropped to eleventh, where it was in 1900. Illinois over the seventy-year period dropped from third to fifth, while Ohio went from fourth to sixth. Only Michigan showed a relative increase as it went from ninth to twelfth, a position it has held since 1920. Wisconsin dropped slightly over the seventy years, while Kentucky has shown a decline in relative position in every census since 1900.

Since 1950 the East North Central Region has been the most populous of the nation's nine regions, and will probably continue in this role during the foreseeable future. This is true even though at the present time the region's population is increasing at a slower rate than the nation as a whole, because the faster growing regions are still well behind in total population. Roughly speaking, these five states which now contain one-fifth of the United States population may be expected to hold approximately this share over the years to come.

Since 1930 one out of every forty United States residents has lived in Indiana. This figure may be expected to hold for at least the present

decade. For the same period one of eight persons residing in the East North Central Region has lived in Indiana. This, too, may be expected to continue.

The East North Central Region, while not growing as rapidly as some of the other regions in the country and perhaps not as fast as the nation as a whole, will continue for some time to be the most populous of the United States' nine regions. Indiana may be expected to keep up with the regional growth rate and will not lag far behind the national figure.

POPULATION DISTRIBUTION

On the west side of the State Office Building in Indianapolis is a plaque quoting the address of President-elect Lincoln as he traveled to Washington for his 1861 inauguration. At that time Lincoln was visiting the most populous county in Indiana. Marion County had held that distinction only since 1860; the four preceding censuses, from 1820 through 1850, each indicated that Wayne County on the Ohio border was home to the largest number of Hoosiers. In 1820, over 8% of the 147,000 people of Indiana lived in Wayne County. Wayne, Dearborn and Franklin counties, all in the east-southeastern part of the state, each had over 10,000 residents. The remaining thirty-two counties in the state at that time had 77% of the population, but none exceeded 10,000

persons. By 1970 only five counties (Brown, Ohio, Switzerland, Union and Warren) had populations under 10,000.

The movement of the state capital to the City of Indiana on the banks of the White River in Marion County, combined with the steady development of transcontinental land routes through that city, put Marion County second in population by 1850. In that year, Wayne County for the last time was the most populous county with 25,300 persons, leading Marion County by 1,200. Jefferson County ranked third in 1850 with 23,900. Those three population leaders together had 7.4% of the state's 988,000 people. Thus, between 1820 and 1850 the population of the state became more dispersed. As late as 1870, Wayne County was among the three most populous counties; in that year it trailed Marion and Allen counties. By 1880 Vigo and Vanderburgh had moved into third and fourth positions respectively. In the next census, 1890, St. Joseph and Elkhart counties pushed ahead of seventh place Wayne County.

Dearborn County, from which Ohio County was separated in the 1830s, moved steadily down in population rank. Between 1820 and 1850, Dearborn added about 9,000 to its number, a sum equal to the population growth of the county over the next 120 years.

The current configuration of ninety-two counties was established in the 1850s with the founding of Newton County. Since 1850 the three most populous counties have steadily increased their percent of the state's total population. Whereas between 1820 and 1850 that percent fell from 23.3 to 7.4%, the three most populous counties in 1970 had 31.1% of the state's people. During the years, however, the three most populous counties have changed. As noted earlier, they were Wayne, Marion and Jefferson in 1850. In 1970 they were Marion, Lake and Allen. But others have been in that select company. Allen County ranked second in the state from 1870 through 1910, to be replaced in 1920 by Lake County. St. Joseph

County displaced Allen in 1930 from the three and held that position through 1960. In 1970 Allen regained third place. For one century (1910) Vigo County occupied third place. Dynamic population shifts continue and the ranking of counties as well as the percentage of population represented by the top three counties continue to vary in the decades ahead.

Marion was the first of Indiana's counties to have more than 100,000 residents, passing that mark in 1880. It remained alone at that level through World War I. Then the 1920 census reported over 100,000 persons in Allen, Lake, St. Joseph and Vigo counties. The 1930 census also reported five counties with more than 100,000 persons, but Vanderburgh replaced Vigo on the list. After World War I, in 1950, Vigo returned to the list and was joined by Madison County. Rapid population and economic growth raised the number of such counties to nine by 1960 with the addition of Delaware and Elkhart counties. La Porte and Tippecanoe joined the list in 1970, giving eleven counties with more than 100,000 people. Porter County is the next most likely candidate for membership in the 100,000 club.

SELECTED CHARACTERISTICS

Hoosiers tend to be native Americans, more so than the citizens of other industrial states. The 1850 census reported that 11.1% of the American population was foreign-born. Indiana's figure, 5.5%, was less than half the national level. In that year, more than 11% of the people of neighboring Ohio, Michigan and Illinois were foreign-born. Over one-third of the people in Wisconsin and Minnesota were born outside this country. By contrast, Kentucky had 3.8% foreign-born. Throughout the decades that pattern has persisted. Sixty years later, in 1910, Indiana had its highest percent of foreign-born citizens—5.9%—at a time when the national average was 14.7%. The Ohio figure was 12.6%, Michigan and Illinois were 1

er 21%, and Kentucky claimed only 1.8% foreign-born. After another sixty years, in 1970, Indiana had 1.6% foreign-born compared with the national 4.7%. Ohio, Illinois, Michigan and Wisconsin ranged from 3.0 to 5.7%, while Kentucky's rate was one-third of Indiana's.

Indiana's black population is also a smaller percentage of the total than is found in neighboring states with similar economic bases. When the Civil War was fought, 0.8% of the state's population was black; nationally 14.1% of the population was black. Table 4 shows that in 1920, 2.8% of the people in the state were black, and that figure has risen steadily to 6.9% in 1970. Over the same half-century, the national figures have gone from 9.9% to 11.1%. Thus, blacks have become a larger part of the Indiana population faster than their relative numbers have grown nationally since the close of World War I.

Today, Indiana's population is younger than the national composite. The median age reported for this state in 1970 was 27.2, nearly a full year younger than the national 28.1 years. But that is a recent phenomenon dating from only 1960. All other censuses taken in this century indicated that Indiana's population was older than the national average. In both 1920 and 1930 the median age in this state was more than two full years above the national level. In the early years of settlement, the youthful population of our state was kept low by hardships and the high incidence of infant and early childhood diseases. Thus, in 1830 the census reported that only one of every three persons in the state was under age 15. As economic and health conditions improved and family life replaced frontier conditions, the percent of the state under 15 rose. In 1850, over 46% of the people of agrarian Indiana were reported to be under age 15. By 1880, that figure fell to 38%. The decline in the relative importance of the under-15 group continued without interruption through the 1940 census when the figure reached a low of 23.9%. The

TABLE 4

Black Population as a Percent of Total Population in Indiana and the United States for Selected Years

<i>Year</i>	<i>Indiana</i>	<i>United States</i>
1860	0.8	14.1
1920	2.8	9.9
1930	3.7	9.7
1950	4.4	10.0
1960	5.8	10.6
1970	6.9	11.1

high fertility rates following the Second World War and continuing into the mid-1950s raised the level to 31.7% by 1960, but recent trends have reduced that population once again. In 1970, 29.5% of the population was 14 or younger and the figure for 1980 is likely to be still lower.

The proportion of the population over age 60 has been rising in Indiana since 1830. In that year, just fourteen years after it was admitted to the nation, only 2.3% of the people were over 60 years old, but the figures rose steadily to 2.9% in 1850 and 5.1% in 1880. At the beginning of this century, the figure stood at 7.2% and has been steady at 13.4 or 13.5% since 1950. We may expect the relative importance of the population over 60 to grow in the years ahead not only in number, but also in social and political impact.

Indiana today is an industrial state with approximately two of every three persons living in urban environments. The physical frontiers have been replaced by social and economic frontiers that demand a different courage from that required of the settlers who secured statehood in 1816. Could they imagine an Indiana with only 3,900 Indians but more than 4,400 Chinese and Japanese? Could they visualize the complex transformation of Hoosier resources into products used throughout the world? No . . . no more than we can envision the reality of their times and the potential of our own future.

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Indiana Business Review

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BUREAU OF ECONOMIC &
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MAR 24 1976

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Bernard Faulkner, Gladys Huang, Judy Norman and Richard Spiers

UNITED STATES-INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES			INDIANA		
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
EMPLOYMENT						
Nonagricultural employment	Jan. 118.7	118.1	117.4	Jan. 110.3	109.5	110.2
Manufacturing employment	Jan. 96.2	95.5	96.7	Jan. 91.9	91.0	94.0
Average weekly hours (no.)	Jan. 39.8	40.8	38.7	Jan. 40.7	41.5	39.4
Average weekly earnings (\$)	Jan. 199.40	204.00	180.73	Jan. 236.47	239.87	208.82
Nonmanufacturing employment	Jan. 128.0	127.2	125.9	Jan. 122.9	122.4	121.3
Unemployment rate (%)	Jan. 7.8	8.3	8.2	Jan. 7.1	7.2	8.7
Unemployment rate—married males (%)	Jan. 4.1	4.8	4.5	—	—	—
Continued unemployment claims	—	—	—	Jan. 211.1	295.8	568.0
PRODUCTION						
Bituminous coal production	Dec. 108.8	122.5	86.4	Jan. 123.3	115.9	108.6
Industrial electricity production	Nov. 139.7	137.0	143.6	—	—	—
Industrial electricity sales	—	—	—	Dec. 135.9	132.4	134.0
Manufacturing production	Jan. 118.2	117.4	111.8	Dec. 125.0	123.8	120.4
Raw steel	Dec. 85.0	85.8	105.3	Dec. 123.0	116.0	122.0
CONSTRUCTION						
Construction activity—total	Dec. 178.9	176.2	173.1	Dec. 165.5	165.8	166.8
Residential housing starts	Jan. 95.0	100.5	78.2	Dec. 110.2	106.3	91.8
Residential expenditures	Dec. 191.1	187.1	161.8	Dec. 217.7	217.9	247.2
Nonresidential expenditures	Dec. 173.0	170.9	178.6	Dec. 138.1	135.7	143.4
Public expenditures	Dec. 168.0	159.0	161.8	—	—	—
Public works and utilities	—	—	—	Dec. 145.7	147.0	109.5
OTHER INDICATORS						
Debits to demand deposits	Dec. 336.7	333.9	326.5	—	—	—
Bank debits	—	—	—	Dec. 331.2	318.0	326.0
Personal income per capita (\$)	Nov. 6020.6	5973.3	5573.6	1975 III 5553.8	5369.8	5339.3
Passenger car sales (thousands)	Jan. 678.0	701.0	578.0	Dec. 14.8	17.7	10.9
Year to date (thousands)	Jan. 678.0	8644.0	578.0	Dec. 210.8	196.0	228.9

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations to R. L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

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UNITED STATES BUSINESS INDICATORS Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rates</i>		
	1975 4 Qtr.	1975 3 Qtr.	1974 4 Qtr.	1975 4 Qtr.	1975 3 Qtr.	1974 4 Qtr.
Gross national product (GNP)	1573.2	1528.5	1441.3	12.2	19.9	4.8
GNP (\$ 1972)	1217.4	1201.5	1186.8	5.4	11.9	-7.5
GNP potential level (\$ 1972)	1388.8	1375.2	1335.3	4.0	4.0	4.0
Government purchases	343.8	334.1	314.4	12.1	12.1	11.6
Personal consumption expenditures	998.7	977.4	908.4	9.0	11.9	.3
Private domestic investment	208.3	194.9	210.3	30.5	112.6	5.3
Corporate profits before tax*	129.5	108.2	146.7	105.2	54.2	64.2
Business inventories	266.2	264.4	267.3	2.7	-1.0	24.0
Federal surplus—deficit (NIA)*	-70.5	-102.2	-8.0	—	—	—

*Data are for preceding quarter.

	<i>Current Levels or Annual Rates</i>			<i>Percentage Change at Annual Rates</i>		
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index†	Dec. 166.4	165.5	155.4	Dec. 6.7	7.5	9.7
Consumer price index—food†	Dec. 181.6	180.6	170.4	Dec. 6.9	6.9	12.8
Wholesale price index†	Jan. 179.6	179.6	172.0	Jan. -2	-4.9	-2.7
Money supply (\$ billions)	Jan. 295.4	295.0	281.9	Jan. 1.6	-2.8	-5.0
Money supply plus time deposits	Jan. 669.1	663.3	614.5	Jan. 11.0	3.1	4.2
Mobile home shipments (thousands)	Dec. 228.0	232.0	195.0	Dec. -18.8	16.9	-41.8
Mortgages—outstanding (\$ billions)‡	Dec. 278.7	275.9	249.3	Dec. 12.8	10.7	2.9
Mortgages—new issues (\$ billions)‡	Dec. 62.4	52.4	26.5	—	—	—
Mortgage rate—new homes	Dec. 9.0	9.0	9.4	—	—	—
Prime rate business loans	Jan. 7.1	7.3	10.1	—	—	—

†Base period, 1967 = 100

‡All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Jan. 1976	Dec. 1975	Jan. 1975	INDIANA	Jan. 1976	Dec. 1975	Jan. 1975
Manufacturing	94.6	94.7	92.0	Manufacturing	85.7	97.5	98.6
Food	94.2	93.2	91.6	Food	85.4	82.3	90.6
Apparel and textiles	98.4	97.5	81.2	Apparel and textiles	94.6	93.8	103.4
Lumber and wood	98.2	96.9	85.6	Lumber and wood	89.7	83.9	108.1
Furniture	101.2	102.2	90.7	Furniture	98.3	93.0	110.9
Paper	96.9	97.5	94.1	Paper	86.2	87.9	101.1
Printing	100.4	100.7	101.8	Printing	93.4	94.0	98.3
Chemicals	102.2	102.7	101.4	Chemicals	107.9	107.3	110.5
Petroleum and coal	112.0	107.4	101.1	Petroleum and coal	66.6	68.9	84.0
Rubber	117.1	116.1	114.0	Rubber	102.1	101.6	118.2
Stone, clay, and glass	96.5	96.4	98.8	Stone, clay, and glass	89.4	91.5	97.4
Primary metals	84.5	85.6	92.9	Primary metals	89.4	90.5	107.4
Fabricated metals	97.9	96.7	96.8	Fabricated metals	101.5	99.5	115.3
Nonelectrical machinery	100.6	99.7	108.6	Nonelectrical machinery	96.4	96.7	116.1
Electrical machinery	91.0	91.1	92.6	Electrical machinery	90.3	90.6	106.1
Transport equipment	87.9	86.1	79.2	Transport equipment	97.4	96.2	109.2

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Dec. 1975	Nov. 1975	Dec. 1974
ANDERSON			
D*	184.5	185.1	154.0
UC†	240.6	342.2	501.5
ES‡	133.0	122.5	124.5
DFORD			
UC	165.0	189.9	294.9
ES	142.9	138.9	110.0
MOOMINGTON			
D	500.8	297.6	360.1
UC	193.0	283.0	416.8
ES	105.5	95.5	86.4
OLUMBUS			
D	516.7	482.5	448.5
UC	300.8	328.2	208.6
ES	140.9	137.8	150.7
ONNERSVILLE			
D	215.3	188.6	181.3
UC	189.7	181.0	248.3
ES	118.0	124.9	135.8
AWFORDSVILLE			
D	291.0	261.8	304.7
UC	852.1	834.1	358.9
ES	153.4	156.6	155.4
ST CHICAGO			
D	258.4	200.9	195.1
UC§	331.0	434.5	158.3
ES	74.9	73.2	103.2
KHART			
D	263.0	220.3	214.1
UC	209.1	305.1	685.9
ES	151.5	138.4	129.5
ANSVILLE			
D	195.6	188.7	210.4
UC	159.6	159.4	139.3
ES	119.8	132.1	116.2
RT WAYNE			
D	338.5	259.7	264.0
UC	385.5	563.1	304.7
ES	72.7	98.5	119.9
ANKFORT			
UC	460.5	559.6	516.1
ES	163.8	172.3	158.0

INDIANA IN PERSPECTIVE

Percent of State Government Revenues Derived From Specific Sources, 1975

	All States	Ind.	Ill.	Ky.	Mich.	Ohio
and gross receipts	54.0	64.8	56.8	54.2	54.0	59.5
enses	7.8	5.7	8.6	5.2	10.9	11.9
ividual income	23.4	21.6	25.8	19.4	24.3	15.9
orporation income	8.3	4.2	7.0	9.1	6.4	8.8
roperty	1.8	1.7	0.1	2.8	3.3	3.0
th and gift	1.8	2.0	1.7	1.4	1.0	0.8
er taxes	2.9	5	0.1	7.9	0.1	0.1

Less than one-half of 1%

SOURCE: U. S. Department of Commerce News, 15 February 1976.

REPORTING CITIES	Dec. 1975	Nov. 1975	Dec. 1974
GARY			
BD	295.8	289.5	264.6
CUC	173.9	229.3	185.1
IES	153.5	147.5	159.8
GOSHEN			
BD	254.4	237.9	225.3
IES	160.2	157.5	151.4
HAMMOND §			
IES	153.4	150.2	142.6
HUNTINGTON			
CUC	419.3	546.0	341.1
IES	136.6	122.4	135.7
INDIANAPOLIS			
BD	428.5	444.2	260.8
CUC	89.1	126.8	411.0
IES	136.5	141.1	138.1
JEFFERSONVILLE			
BD	348.9	265.9	465.9
IES	129.6	125.3	138.3
KOKOMO			
CUC	190.6	272.7	955.3
IES	172.2	161.8	169.5
LAFAYETTE			
BD	286.0	234.1	214.7
CUC	514.8	814.9	360.6
IES	132.0	134.9	148.3
LA PORTE			
CUC	433.9	508.2	301.4
IES	179.4	176.4	176.9
LOGANSPORT			
BD	389.7	358.7	234.7
CUC	155.2	166.0	269.1
IES	193.7	207.7	160.7
MADISON			
BD	241.8	213.2	227.1
CUC	346.4	309.5	145.1
IES	111.3	79.5	130.1
MARION			
BD	N/A	210.1	163.5
CUC	227.0	225.8	527.4
IES	116.5	110.6	105.5
MICHIGAN CITY			
BD	283.8	250.6	245.3
CUC	274.1	371.2	210.1
IES	172.4	160.5	176.0
MISHAWAKA			
BD	155.4	127.7	255.7
IES	258.2	140.2	127.5
MUNCIE			
BD	260.3	250.3	241.3
CUC	133.0	157.1	242.4
IES	109.7	103.2	102.7

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of

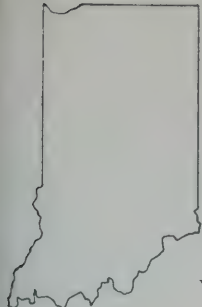
East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Dec. 1975	Nov. 1975	Dec. 1974	REPORTING CITIES	Dec. 1975	Nov. 1975	D
NEW ALBANY				TERRE HAUTE			
BD*	396.0	440.1	433.6	BD	253.6	260.1	22
CUC†	777.8	899.7	615.5	CUC	214.8	261.4	25
IES‡	101.5	92.6	97.4	IES	157.9	173.6	15
NEW CASTLE				VALPARAISO			
BD	326.4	252.4	261.0	CUC	319.3	381.9	29
CUC	165.0	190.3	727.4	IES	165.1	179.5	16
IES	169.9	127.9	84.3	VINCENNES			
PERU				BD	244.5	225.6	22
BD	N/A	245.2	277.4	CUC	113.0	168.4	17
CUC	142.0	221.2	294.9	IES	125.0	122.0	13
IES	196.8	177.8	170.5	WABASH			
RICHMOND				BD	227.8	201.3	18
BD	200.1	176.3	189.1	CUC	223.7	269.9	31
CUC	379.2	473.7	352.2	IES	145.7	152.3	13
IES	210.5	189.9	196.8				
SEYMOUR							
BD	344.9	312.0	300.8				
CUC	117.6	125.2	137.7				
IES	100.4	98.6	107.3				
SOUTH BEND							
BD	235.9	226.2	208.8				
CUC	195.3	230.2	388.5				
IES	114.1	106.0	104.6				

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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	UNITED STATES			INDIANA		
	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT						
Agricultural employment	Feb. 119.0	118.7	116.7	Feb. 109.5	110.3	109.4
Manufacturing employment	Feb. 96.5	96.3	94.5	Feb. 92.4	91.9	92.3
Average weekly hours (no.)	Feb. 39.9	39.9	38.5	Feb. 40.8	40.6	39.2
Average weekly earnings (\$)	Feb. 200.30	200.30	180.18	Feb. 236.64	235.89	209.72
Nonmanufacturing employment	Jan. 128.0	127.2	125.9	Feb. 122.3	122.7	121.2
Unemployment rate (%)	Feb. 7.6	7.8	8.0	Feb. 6.4	7.0	8.1
Unemployment rate—married males (%)	Feb. 4.1	4.1	4.7	—	—	—
Continued unemployment claims	—	—	—	Feb. 199.2	211.2	433.0
PRODUCTION						
Cuminous coal production	Jan. 109.3	106.4	113.7	Feb. 113.3	123.3	96.7
Industrial electricity production	Dec. 141.2	139.0	137.0	—	—	—
Industrial electricity sales	—	—	—	Jan. 135.9	135.9	138.6
Manufacturing production	Feb. 118.6	117.7	109.3	Jan. 124.7	125.9	117.9
Raw steel	Jan. 89.6	84.0	105.6	Jan. 120.9	123.0	126.3
CONSTRUCTION						
Construction activity—total	Jan. 180.5	180.2	170.8	Jan. 163.0	165.5	161.1
Residential housing starts	Feb. 121.0	95.3	74.2	Jan. 76.0	110.2	98.8
Residential expenditures	Jan. 191.5	191.1	155.8	Jan. 211.3	217.7	234.2
Nonresidential expenditures	Jan. 175.1	175.0	178.1	Jan. 130.5	138.1	144.6
Public expenditures	Jan. 170.7	169.5	160.2	—	—	—
Public works and utilities	—	—	—	Jan. 154.1	145.7	111.8
OTHER INDICATORS						
Checks to demand deposits	Jan. 328.5	335.4	311.4	—	—	—
Bank debits	—	—	—	Jan. 302.5	334.9	284.9
Personal income per capita (\$)	Dec. 6,068.6	6,047.7	5,645.0	1975 III 5,553.8	5,369.8	5,339.3
Passenger car sales (thousands)	Jan. 679.0	701.0	578.0	Jan. 16.4	14.8	14.7
Year to date (thousands)	Jan. 679.0	8,644.0	578.0	Jan. 16.4	210.8	14.7

NOTE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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Spendable Average Weekly Earnings by County (first quarter 1975)

(Editor's Note—This series is produced from data provided by the Indiana Employment Security Division. It is derived by deducting federal income taxes and social security taxes from gross average weekly earnings for each county.)

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings (In Thousands)	% Change Since Last Quarter
		All	Manufacturing	All	% Change Since Last Quarter	Manufacturing	% Change Since Last Quarter		
Adams	7,348	158.88	186.40	142.07	8.0	163.00	11.0	1,044,136	8
Allen	111,045	190.88	249.45	166.37	3.5	211.02	4.4	18,474,610	2
Bartholomew	24,054	207.83	245.75	179.10	-1.3	208.13	-1.1	4,308,543	-4
Benton	1,640	159.04	153.56	142.19	4.0	137.99	13.2	233,258	2
Blackford	3,233	169.21	206.01	150.04	10.1	177.74	13.6	485,228	7
Boone	5,823	146.26	198.93	133.02	3.7	172.42	5.9	774,732	8
Brown	907	86.61	145.27	81.36	-1.8	132.34	17.4	73,777	27
Carroll	2,722	136.03	155.87	125.42	5.1	139.74	12.0	341,678	10
Cass	10,807	165.74	207.85	147.36	6.2	179.12	11.7	1,592,874	6
Clark	19,935	161.49	209.40	144.08	3.0	180.28	4.7	2,872,450	3
Clay	2,976	141.68	161.19	129.90	8.3	143.85	11.9	386,896	15
Clinton	6,689	149.26	179.18	135.06	7.2	157.57	9.9	903,820	9
Crawford	609	127.71	92.30	118.03	8.3	86.45	-8.3	71,992	22
Daviess	4,926	127.15	152.77	117.53	4.7	137.46	5.1	579,101	6
Dearborn	6,833	186.67	233.96	163.20	4.4	198.91	4.6	1,115,552	9
Decatur	5,000	157.49	185.17	140.99	7.5	162.07	8.2	705,151	9
Dekalb	7,800	167.50	211.66	148.73	5.9	181.98	7.6	1,159,858	3
Delaware	36,715	193.90	265.58	168.64	5.5	223.28	8.8	6,191,900	7
Dubois	11,813	152.48	167.60	137.26	10.4	148.80	12.6	1,622,246	14
Elkhart	54,182	187.97	219.62	164.18	7.2	187.97	7.8	8,898,312	14
Fayette	9,427	179.77	207.26	158.02	-5.4	178.68	-10.0	1,489,798	-3
Floyd	10,770	148.16	168.33	134.31	2.5	149.37	-0.1	1,447,283	5
Fountain	3,874	155.63	187.34	139.56	5.5	163.71	5.1	540,853	8
Franklin	1,295	123.03	159.32	113.87	10.5	142.41	18.5	147,663	18
Fulton	3,927	144.14	172.91	131.57	6.4	152.86	7.2	516,808	8
Gibson	6,130	162.04	220.50	144.50	6.0	188.63	9.1	885,909	7
Grant	24,550	189.01	229.79	164.96	5.4	195.65	5.5	4,050,139	5
Greene	3,453	142.34	155.61	130.35	16.1	139.54	27.0	450,063	16
Hamilton	11,482	164.15	197.47	146.13	2.7	171.32	2.9	1,678,318	7
Hancock	5,189	165.35	236.20	147.06	-12.2	200.67	-27.3	763,333	-7
Harrison	3,016	133.49	156.50	123.16	0.1	140.23	-0.7	372,224	1
Hendricks	6,265	155.71	178.14	139.62	3.3	156.79	-3.5	875,108	8
Henry	9,956	187.78	269.87	164.04	15.7	226.52	25.3	1,633,469	17
Howard	31,870	215.67	269.99	185.00	4.4	226.61	5.5	5,896,609	6
Huntington	9,574	145.06	166.72	132.20	4.7	148.12	5.7	1,265,819	4
Jackson	7,591	149.27	170.19	135.07	5.8	150.80	10.3	1,025,626	3
Jasper	4,082	149.43	167.55	135.18	8.1	148.76	13.6	551,959	11
Jay	6,011	165.65	195.62	147.29	5.2	169.93	4.6	885,241	8
Jefferson	7,591	145.73	164.19	132.66	3.9	146.16	7.9	1,007,152	4
Jennings	3,373	142.69	166.10	130.59	4.5	147.64	11.3	440,649	7
Johnson	11,646	146.78	207.43	133.37	9.5	178.80	14.2	1,553,972	14
Knox	8,557	147.75	205.93	134.03	6.0	177.68	6.4	1,147,147	5
Kosciusko	15,612	160.80	195.83	143.55	5.2	170.09	6.5	2,241,657	8
Lagrange	3,953	158.67	196.06	141.90	11.7	170.26	15.6	561,167	17
Lake	171,834	224.57	279.78	191.69	0.8	234.53	1.7	32,938,089	-0
La Porte	32,163	174.04	205.51	153.71	3.5	177.36	4.3	4,944,447	4
Lawrence	7,528	177.22	222.27	156.10	3.9	189.96	0.9	1,174,924	11

Average Weekly Earnings by County, Continued

County	Employment	Average Weekly Earnings			Rates (\$ billions)		Percentage Change at Annual Rates		
		All	Manu- facturing		1974 4 Qtr.	1975 4 Qtr.	1975 3 Qtr.	1974 4 Qtr.	
son	42,075	207.68	265.05	178	1,441.3	12.0	19.9	4.8	.5
on	320,279	198.38	252.83	172	1,186.8	4.9	11.9	-7.5	
hall	9,162	158.10	187.76	141	1,335.3	4.0	4.0	4.0	.0
in	1,606	142.06	168.36	130					.7
ni	5,869	132.03	148.18	121	314.4	13.4	12.1	11.6	.1
roe	27,206	164.49	186.59	146	908.4	10.1	11.9	0.3	
					210.3	23.4	112.6	5.3	.3
Montgomery	9,133	183.61	234.94	160					.2
gan	4,989	134.10	158.51	123	146.7	105.2	54.2	64.2	
ton	1,983	125.90	143.99	116	267.3	2.7	-1.0	24.0	.5
e	7,371	145.53	169.38	132	-8.0	-	-	-	
	297	100.98	126.20	94					.7

					Annual Rates		Percentage Change at Annual Rates			
					Month	One Year Ago	Latest Month	Previous Month	One Year Ago	
ge	3,810	125.28	130.13	115	157.3	Feb.	0.7	5.2	6.3	
n	969	117.59	167.52	109	171.1	Feb.	-11.3	-2.6	-1.4	
e	1,680	122.07	126.47	113	170.6	Feb.	-6.3	-0.2	-9.5	
y	4,462	138.28	150.82	127						
	2,682	270.76	146.48	227						
er	25,489	222.87	298.49	190	281.9	Feb.	6.7	1.2	-	
y	5,196	201.97	258.85	174	618.2	Feb.	15.3	10.8	7.5	
ski	1,786	147.84	179.91	134	185.0	Jan.	454.9	-18.8	-46.8	
am	5,113	160.65	217.09	143						
Dolph	7,466	170.66	195.57	151						
ey	5,375	177.42	223.32	156	249.3	Dec.	12.8	10.7	2.9	
a	2,962	156.97	214.75	140	26.5	-	-	-	-	
Joseph	77,892	181.35	236.30	159	9.3	-	-	-	-	
t	3,008	146.00	178.42	132	9.0	-	-	-	-	
oy	7,925	147.08	172.78	133						
er	2,167	130.02	156.16	120						
is	2,696	136.84	188.56	126						
ven	4,864	140.02	187.76	128						
in	2,896	175.24	138.08	154						
terland	860	108.99	104.95	101						

INDIANA
Base Period: 1967 = 100

canoe	38,490	179.11	242.32	157	INDIANA	Feb.	Jan.	Feb.
	2,297	156.99	196.86	140		1976	1976	1975
	653	148.07	199.18	134				
burgh	64,703	168.38	202.28	149				
n	2,774	196.12	243.82	170				
					Manufacturing	88.4	85.6	98.8
					Food	85.3	85.6	89.6
					Apparel and textiles	94.6	94.1	107.5
					Lumber and wood	90.3	90.0	104.7
					Furniture	101.6	96.9	104.9
					Paper	90.2	86.6	103.1
					Printing	97.6	93.0	97.6
					Chemicals	104.8	105.8	110.8
					Petroleum and coal	74.1	68.8	80.6
					Rubber	105.1	102.9	117.6
					Stone, clay, and glass	91.2	88.6	99.0
					Primary metals	90.7	89.4	101.9
					Fabricated metals	104.3	101.3	113.9
					Nonelectrical machinery	96.1	96.2	115.6
					Electrical machinery	91.4	90.7	102.7
					Transport equipment	94.9	96.0	105.9

INDIANA

	Feb. 1976	Jan. 1976	Feb. 1975
Manufacturing	88.4	85.6	98.8
Food	85.3	85.6	89.6
Apparel and textiles	94.6	94.1	107.5
Lumber and wood	90.3	90.0	104.7
Furniture	101.6	96.9	104.9
Paper	90.2	86.6	103.1
Printing	97.6	93.0	97.6
Chemicals	104.8	105.8	110.8
Petroleum and coal	74.1	68.8	80.6
Rubber	105.1	102.9	117.6
Stone, clay, and glass	91.2	88.6	99.0
Primary metals	90.7	89.4	101.9
Fabricated metals	104.3	101.3	113.9
Nonelectrical machinery	96.1	96.2	115.6
Electrical machinery	91.4	90.7	102.7
Transport equipment	94.9	96.0	105.9

Spendable Average Weekly Earnings by County, Continued

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings (In Thousands)	% Change Since Last Quarter
		All	Manu- facturing	All	% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter		
Madison	42,075	207.68	265.05	178.99	-1.3	222.88	-3.2	7,532,357	1.0
Marion	320,279	198.38	252.83	172.00	-	213.63	-2.3	55,093,686	0.9
Marshall	9,162	158.10	187.76	141.46	4.3	164.02	2.1	1,296,869	11.1
Martin	1,606	142.06	168.36	130.16	11.1	149.39	13.8	209,130	13.5
Miami	5,869	132.03	148.18	121.86	-0.3	134.33	-0.8	715,382	-0.6
Monroe	27,206	164.49	186.59	146.39	7.2	163.14	20.5	3,982,612	6.3
Montgomery	9,133	183.61	234.94	160.90	-1.7	199.68	-3.1	1,469,574	-0.3
Morgan	4,989	134.10	158.51	123.70	4.5	141.78	-5.9	617,572	11.6
Newton	1,983	125.90	143.99	116.42	7.6	131.47	14.4	230,985	6.3
Noble	7,371	145.53	169.38	132.52	3.1	150.18	3.6	975,964	6.3
Ohio	297	100.98	126.20	94.22	3.8	116.69	-11.8	27,965	18.8
Orange	3,810	125.28	130.13	115.87	5.2	120.18	3.9	441,696	16.6
Owen	969	117.59	167.52	109.03	5.1	148.74	4.5	105,630	8.5
Parke	1,680	122.07	126.47	113.02	-1.4	116.93	3.1	189,932	4.2
Perry	4,462	138.28	150.82	127.42	3.7	136.13	3.1	568,658	5.3
Pike	2,682	270.76	146.48	227.20	11.2	133.17	8.7	609,411	21.8
Porter	25,489	222.87	298.49	190.41	4.7	249.78	9.0	4,853,294	6.6
Posey	5,196	201.97	258.85	174.70	8.2	218.19	11.8	907,819	7.0
Pulaski	1,786	147.84	179.91	134.10	0.1	158.12	1.8	239,554	3.4
Putnam	5,113	160.65	217.09	143.43	4.9	186.06	6.5	733,676	6.1
Randolph	7,466	170.66	195.57	151.16	7.2	169.89	8.7	1,128,427	5.3
Ripley	5,375	177.42	223.32	156.25	5.0	190.75	3.6	839,966	7.6
Rush	2,962	156.97	214.75	140.59	8.2	184.31	10.5	416,488	11.8
St. Joseph	77,892	181.35	236.30	159.20	3.2	200.74	4.9	12,400,442	4.1
Scott	3,008	146.00	178.42	132.84	9.4	157.00	14.8	399,832	16.1
Shelby	7,925	147.08	172.78	133.58	5.4	152.76	8.8	1,059,130	8.8
Spencer	2,167	130.02	156.16	120.08	1.7	139.97	11.1	260,491	8.9
Starke	2,696	136.84	188.56	126.14	3.2	164.62	9.8	340,159	4.0
Stueben	4,864	140.02	187.76	128.76	3.2	164.02	6.3	626,923	7.3
Sullivan	2,896	175.24	138.08	154.61	9.3	127.24	18.4	447,833	14.1
Switzerland	860	108.99	104.95	101.36	4.5	97.76	2.8	87,205	15.4
Tippecanoe	38,490	179.11	242.32	157.52	-1.7	205.45	-0.4	6,062,626	-1.4
Tipton	2,297	156.99	196.86	140.61	-1.7	170.86	-5.6	323,182	0.6
Union	653	148.07	199.18	134.25	8.1	172.60	13.2	87,807	17.6
Vanderburgh	64,703	168.38	202.28	149.40	1.6	174.93	-1.1	9,668,292	4.1
Vermillion	2,774	196.12	243.82	170.30	-4.5	206.62	-17.4	472,477	-0.1
Vigo	38,055	169.97	195.12	150.63	5.1	169.55	4.4	5,732,253	5.8
Wabash	10,353	152.78	178.63	137.46	1.9	157.16	1.4	1,423,440	5.7
Warren	1,079	162.62	-	144.95	-	7.47	-	156,403	0.1
Warrick	7,790	260.03	322.15	219.08	1.4	268.73	2.1	1,707,186	4.3
Washington	3,469	126.35	131.33	116.82	7.2	121.24	9.2	405,464	4.3
Wayne	24,650	174.46	228.62	154.03	4.6	194.74	7.2	3,797,971	5.8
Wells	5,577	166.65	216.80	148.06	6.4	185.85	9.3	826,039	7.3
White	5,158	136.38	153.68	125.73	4.2	138.07	5.1	649,305	16.7
Whitley	5,181	161.95	187.86	144.43	11.4	164.10	14.0	748,547	14.8
Not Classified	41,958	217.59	268.01	186.44	3.0	225.12	-4.2	7,823,516	1.9

UNITED STATES BUSINESS INDICATORS
Quarterly Data

	Seasonally Adjusted Annual Rates (\$ billions)			Percentage Change at Annual Rates		
	1975 4 Qtr.	1975 3 Qtr.	1974 4 Qtr.	1975 4 Qtr.	1975 3 Qtr.	1974 4 Qtr.
Gross national product (GNP)	1,572.5	1,528.5	1,441.3	12.0	19.9	4.8
GNP (\$ 1972)	1,215.9	1,201.5	1,186.8	4.9	11.9	-7.5
GNP potential level (\$ 1972)	1,388.8	1,375.2	1,335.3	4.0	4.0	4.0
Government purchases	344.8	334.1	314.4	13.4	12.1	11.6
Personal consumption expenditures	1,001.1	977.4	908.4	10.1	11.9	0.3
Private domestic investment	205.4	194.9	210.3	23.4	112.6	5.3
Corporate profits before tax*	129.5	108.2	146.7	105.2	54.2	64.2
Business inventories	266.2	264.4	267.3	2.7	-1.0	24.0
Federal surplus-deficit (NIA)*	-70.5	-102.2	-8.0	-	-	-

*Data are for preceding quarter.

	Current Levels or Annual Rates			Percentage Change at Annual Rates		
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index†	Feb. 167.2	167.1	157.3	Feb. 0.7	5.2	6.3
Consumer price index—food†	Feb. 179.4	181.2	171.1	Feb. -11.3	-2.6	-1.4
Wholesale price index†	Feb. 178.6	179.6	170.6	Feb. -6.3	-0.2	-9.5
Money supply (\$ billions)	Feb. 296.9	295.3	281.9	Feb. 6.7	1.2	-
Money supply plus time deposits	Feb. 677.0	669.0	618.2	Feb. 15.3	10.8	7.5
Mobile home shipments (thousands)	Jan. 263.0	228.0	185.0	Jan. 454.9	18.8	-46.8
Mortgages—outstanding (\$ billions)‡	Dec. 278.7	275.9	249.3	Dec. 12.8	10.7	2.9
Mortgages—new issues (\$ billions)‡	Dec. 62.4	52.4	26.5	-	-	-
Mortgage rate—new homes	Jan. 9.0	9.0	9.3	-	-	-
Prime rate business loans	Feb. 6.8	7.0	9.0	-	-	-

†Base period, 1967 = 100

‡ All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Feb. 1976	Jan. 1976	Feb. 1975	INDIANA	Feb. 1976	Jan. 1976	Feb. 1975
Manufacturing	95.3	94.9	89.8	Manufacturing	88.4	85.6	98.8
Food	95.1	94.7	90.3	Food	85.3	85.6	89.6
Apparel and textiles	97.0	99.5	78.5	Apparel and textiles	94.6	94.1	107.5
Lumber and wood	102.9	101.6	85.0	Lumber and wood	90.3	90.0	104.7
Furniture	104.4	103.0	88.2	Furniture	101.6	96.9	104.9
Paper	99.1	97.2	90.1	Paper	90.2	86.6	103.1
Printing	100.3	100.9	100.9	Printing	97.6	93.0	97.6
Chemicals	103.5	102.6	99.7	Chemicals	104.8	105.8	110.8
Petroleum and coal	111.2	111.2	100.4	Petroleum and coal	74.1	68.8	80.6
Rubber	118.3	116.8	106.3	Rubber	105.1	102.9	117.6
Stone, clay, and glass	97.2	98.3	96.5	Stone, clay, and glass	91.2	88.6	99.0
Primary metals	84.6	83.8	94.0	Primary metals	90.7	89.4	101.9
Fabricated metals	99.5	99.1	92.8	Fabricated metals	104.3	101.3	113.9
Nonelectrical machinery	99.4	100.3	104.0	Nonelectrical machinery	96.1	96.2	115.6
Electrical machinery	91.0	91.4	88.1	Electrical machinery	91.4	90.7	102.7
Transport equipment	87.9	88.9	75.3	Transport equipment	94.9	96.0	105.9

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Jan. 1976	Dec. 1975	Jan. 1975
ANDERSON			
BD*	171.9	184.5	170.1
CUC†	222.5	240.6	150.2
IES‡	138.1	133.8	130.0
BEDFORD			
CUC	111.3	165.0	139.7
IES	127.4	142.9	103.6
BLOOMINGTON			
BD	362.6	500.8	389.8
CUC	181.1	193.0	265.7
IES	98.6	105.5	106.7
COLUMBUS			
BD	322.1	516.7	139.5
CUC	209.9	300.8	120.6
IES	131.5	140.9	142.9
CONNERSVILLE			
BD	206.3	215.3	176.4
CUC	169.2	189.7	148.3
IES	120.3	112.6	141.5
CRAWFORDSVILLE			
BD	293.7	291.2	245.0
CUC	1,008.0	852.1	245.0
IES	156.4	160.8	141.0
EAST CHICAGO			
BD	211.2	205.5	238.5
CUC §	292.9	331.0	122.3
IES	81.4	74.9	115.1
ELKHART			
BD	267.3	281.5	233.7
CUC	209.6	209.1	571.9
IES	144.6	151.5	151.1
EVANSVILLE			
BD	209.9	229.9	180.9
CUC	199.0	159.6	100.6
IES	115.8	119.8	128.2
FORT WAYNE			
BD	292.0	338.5	238.1
CUC	385.1	385.5	123.2
IES	101.2	72.7	127.0
FRANKFORT			
CUC	449.9	460.5	247.1
IES	170.9	163.8	162.0

INDIANA IN PERSPECTIVE

Indiana Population by Age, 1975 Estimates

	Change Since 1970		
	Number (Thousands)	Number (Thousands)	Percent
Total Resident Population	5,311	+117	+2.3
Under 5	417	-39	-8.5
5 to 17	1,293	-92	-6.7
18 to 44	2,024	+194	+10.6
45 to 64	1,047	+16	+1.6
65 and over	531	+39	+8.0

SOURCE: U. S. Bureau of the Census, *Current Population Reports*, no. 619, January 1976, p. 25.

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Jan. 1976	Dec. 1975	Jan. 1975
NEW ALBANY			
BD*	207.2	396.0	401.4
CUC†	1,069.2	777.8	331.8
IES‡	104.0	101.5	108.3
NEW CASTLE			
BD	260.8	326.4	241.6
CUC	193.6	165.0	132.5
IES	137.3	169.9	163.4
PERU			
BD	222.5	N/A	290.7
CUC	139.4	142.0	73.5
IES	190.5	196.8	156.2
RICHMOND			
BD	194.7	200.1	171.8
CUC	327.8	379.2	180.1
IES	205.2	210.5	175.2
SEYMOUR			
BD	337.5	344.9	284.9
CUC	111.0	117.6	66.5
IES	103.6	100.4	115.9
SOUTH BEND			
BD	211.3	235.9	205.7
CUC	202.8	195.3	186.7
IES	107.4	114.1	101.4

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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BUR OF ECON + BUS RES
UNIV OF ILLINOIS
408 DAVID KINLEY HALL
URBANA
JUL 1976

ENTERED AS SECOND CLASS MAIL
AT THE BLOOMINGTON, INDIANA, POST OFFICE

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales
§Continued Unemployment Claims of
East Chicago and Hammond are combined

Division of Research
Graduate School of Business
Indiana University
Bloomington, Indiana 47401
JUL 1976

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Jan. 1976	Dec. 1975	Jan. 1975	REPORTING CITIES	Jan. 1976	Dec. 1975
NEW ALBANY				TERRE HAUTE		
BD*	207.2	396.0	401.4	BD	219.3	253.6
CUC†	1,069.2	777.8	331.8	CUC	244.7	214.8
IES‡	104.0	101.5	108.3	IES	152.1	157.9
NEW CASTLE				VALPARAISO		
BD	260.8	326.4	241.6	CUC	233.5	319.3
CUC	193.6	165.0	132.5	IES	173.4	165.1
IES	137.3	169.9	163.4	VINCENNES		
PERU				BD	261.3	244.5
BD	222.5	N/A	290.7	CUC	145.0	113.0
CUC	139.4	142.0	73.5	IES	121.6	125.0
IES	190.5	196.8	156.2	WABASH		
RICHMOND				BD	196.1	227.8
BD	194.7	200.1	171.8	CUC	243.9	223.7
CUC	327.8	379.2	180.1	IES	161.2	145.7
IES	205.2	210.5	175.2			
SEYMOUR						
BD	337.5	344.9	284.9			
CUC	111.0	117.6	66.5			
IES	103.6	100.4	115.9			
SOUTH BEND						
BD	211.3	235.9	205.7			
CUC	202.8	195.3	186.7			
IES	107.4	114.1	101.4			

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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Indiana Business Review

Highlights of the Outlook—A Message from the Dean ¶

The Outlook for 1976

Government Purchases of Goods and Services	4
Business Fixed Investment	5
Residential Construction	6
Inventories	7
Net Exports	7
Personal Consumption Expenditures	8
Prices and Interest Rates	10

The Indiana Economy

Introduction	13
Indianapolis	15
Gary-Hammond-East Chicago	17
Fort Wayne	18
Evansville	20
South Bend-Elkhart	21
Terre Haute	23
Jeffersonville-New Albany	24
Muncie	26

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HIGHLIGHTS OF THE OUTLOOK—A MESSAGE FROM THE DEAN

The current recovery has three overlapping stages: a resurgence of consumer expenditures, a period of inventory accumulation, and an anticipated increase in our nation's productive capabilities. The tax rebate in the spring of 1975 spurred consumer expenditures by providing not only dollars but a reversal of expectations. The strength of consumer spending, augmented in no small way by the sharp reduction in the rate at which prices were rising, has contributed to a turnaround in inventories. A capital spending increase is anticipated to give the third and confirming impetus to sustain recovery. The authors of this reassessment of the forecast published in the November-December 1975 issue of this *Review* find the momentum of the recovery sustaining significant economic growth through 1976 and possibly into 1977.

Government will not provide much stimulus to real growth in the coming months. The federal budget deficit will have a diminishing stimulative effect. State and local governments are carefully improving their fiscal positions in a renewed spirit of financial conservatism.

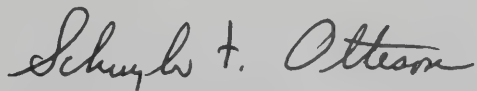
Retail firms have been increasing inventory levels. But manufacturing firms, which are still operating well below their preferred operating levels, are unwilling to commit resources to expanding productive capacity. Nonetheless, sufficient investment is anticipated so that shortages in critical inputs will not develop in the months ahead.

The recovery in housing has been almost exclusively in single-family units. A slow improvement in multifamily residential construction can be expected, but it will have a very uneven geographic distribution. The financial conditions of thrift institutions which support housing markets are good; single-family market improvements will continue to depend on the race between real earnings and construction costs.

Consumers were able to lead the recovery because of the slowing of inflation. This Outlook anticipates a minimum 6% rate of inflation with double-digit inflation excluded from the forecast, unless extremely adverse events, such as a major crop failure, intervene. Some increase in both short- and long-term interest rates is expected.

These national trends have positive implications for this state. We can look forward to further improvements in local labor markets and higher personal income levels, although the battle for real income advances will continue as long as inflation persists.

We offer these observations as background for and input to the important decisions Indiana citizens will be making in the coming months. The continued prosperity of 1976 will offer many opportunities to make our nation's third century begin on a strong rising note.



Schuyler F. Otteson, Dean
School of Business
Indiana University

The Outlook: A Reevaluation of the Forecast for 1976

This section of the Outlook was prepared by Rober C. Turner, distinguished professor of Business Economics and Public Policy, and Eugene Brady, chairman and professor of Business Economics and Public Policy, with the assistance of Jack Wentworth, professor of Business Administration and chairman of the MBA program, who prepared the outlook for automobiles.

As we approach mid-year, it seems highly probable that the economic recovery has gained sufficient momentum to continue at least through the balance of 1976. We say this in spite of a few negative signs: a small decline in the indexes of consumer confidence, a nervous stock market, an upcreep in short-term interest rates, and significant increases in certain components of the wholesale price index.

In spite of these signs, the strength of the recovery so far this year is such that, barring unpredictable, adverse external events, a continuation is assured for several months at least. The crucial question is: how long can the recovery be kept going at a sustainable rate? The public policy makers are faced with a dilemma—how to get the inflation rate down to tolerable levels and keep it there, and how to increase the level of demand and output so as

to reduce the unemployment rate, again to a tolerable level. Actions to achieve one objective are likely to interfere with achieving the other objective. As we describe later, it will take skillful public policy management and cooperation from business and labor to succeed in this “tightrope” act.

We suggest three possible scenarios for the next year or two, from mid-1976 into 1978, as follows:

1. A steady, well-balanced growth in real GNP. Continuing support for such a steady recovery could come from a moderate expansion in investment in business plant and equipment, a steady but not excessive rise in inventories, a gradual but strong recovery in housing including multi-family units, a good recovery abroad which would help our exports, and an increase in real government spending at all

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vels about equal to the growth in the real GNP in the private sector of the economy, accompanied by a gradual decline in the size of the federal deficit. If this steady expansion is accompanied by a moderately expansionary monetary policy, with interest rates allowed to rise only slightly, the momentum of the recovery could be maintained for many months. A key criterion, of course, will be the inflation rate. The event that could trigger a significant upturn in the inflation rate would be fear of impending shortages (a moderate rise in capital spending, especially in basic raw materials industries, should reduce the likelihood of such shortages), a crop failure in 1976 (or 1977), or some external shock that undermines confidence. But if these events are avoided, the rise in the inflation rate could be very gradual—gradual enough to preclude inventory speculation or an adverse consumer reaction.

This steady growth would be the ideal sequence of economic events. It would not get the unemployment rate down as fast as we would like, to be sure, but substantial progress could be made.

2. An excessive boom in the next twelve to eighteen months. As we suggest in the analyses to follow, the boom could be a three-stage affair. Consumer spending, if it continues to rise strongly, would be the first stage. This in turn could trigger an inventory boom, as it already has briefly to a minor degree. A capital boom could be the third stage.

If the anticipated second and third stage “lift-offs” are spread smoothly over a period of several years, we could see substantial increases in output without excessive inflationary pressures. But if the three lift-off boosts come too close together, the U. S. economy could be overstimulated and serious demand-pull inflation could erupt. Then the Federal Reserve would no doubt feel compelled to apply the monetary brakes and we could see another

monetary crunch in 1977 or 1978. Another “bust” would be the almost inevitable outcome.

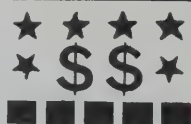
3. The third possible scenario is excessively restrictive policies in the next year or so, in the interest of breaking the back of the chronic inflation that has been built into our economy. Monetary policy could be kept very tight, thus forcing interest rates up sharply and slowing down the recovery in housing and capital goods industries. Fiscal policy could be unreasonably tight, again for the purpose of stopping inflation, thus dampening consumer spending. Such a policy might reduce the inflation rate to 2 or 3%, but it would be at the expense of high interest rates, continued high unemployment and little gain in incomes.

All three of these scenarios are possible. It will take extremely wise and careful management of public policy—fiscal and monetary—to achieve Scenario No. 1. Given a built-in inflation rate of 6 to 7% to start with, achieving a reduction in that rate and at the same time promoting continuous recovery and a steady decline in the unemployment rate is very tricky business. It can be accomplished only with a large measure of cooperation from business and labor unions. Much will depend, of course, on the outcome of the elections this fall.

Forecasting beyond a few months into the future is risky. There is an old saying among forecasters: “If you must forecast, forecast often.” But as a preliminary estimate of 1976-78, we suggest that the probability of Scenario No. 1 is about 50%, of Scenario No. 2 about 40% and of No. 3 about 10%. We make these estimates with due humility, however, and events may well require a reassessment before our December outlook is published.

Focusing our attention on the shorter run, we see the outlook for the balance of 1976 for each of the major components of demand and for interest rates and the inflation rate as follows:

**GOVERNMENT
PURCHASES OF
GOODS & SERVICES**



Events since our forecast of late last year have not altered the pattern of our forecast, though the numbers have to be changed to reflect revisions, both definitional and statistical, made by the Department of Commerce in the GNP accounts in January 1976. Some classification revisions shift GPGS items to other components of GNP and thus do not affect total GNP. The net effect of the revisions (described in painful detail in Part I of the January 1976 issue of the *Survey of Current Business*) was to lower the level of both federal and state and local GPGS by small, but not insignificant, amounts.

The main policy change that affects federal GPGS is the decline in congressional and public sentiment for major cuts in the defense program. As a consequence, Congress will apparently give the President almost the total amount he asked for in the FY 1977 budget (plus the budget for the July 1-Sept. 30, 1976, transition period from the old to the new fiscal year). However, most of the items on which we expected cuts are long lead-time items, and will not affect spending appreciably in calendar 1976.

In the nondefense categories of the budget, Congress will appropriate more than the President asked for. The resolution on spending targets for FY 1977, recently passed by both houses, calls for a ceiling on total expenditures of \$413.3 billion, \$17.5 billion above the President's budget. Part of this \$17.5 billion is offset by: (1) an elimination in the joint resolution of the additional tax cuts recommended by the President; (2) a more optimistic estimate of tax receipts which in turn reflects a more vigorous improvement in economic activity than was assumed in the President's budget; and (3) \$2 billion of additional revenue from

revisions ("reforms") in the tax laws. The result is an estimated deficit in FY 1977 of \$50.8 billion, \$6.2 billion higher than the \$44.6 billion deficit estimated by the President (including amendments made by him since January). The tax reforms are not likely to be made. The President's budget also included an increase of \$2 billion in income from offshore leases which probably will not materialize. Hence the \$50.8 billion figure may be a reasonable estimate of the difference in the deficit planned by the President and proposed in the congressional resolution.

Whether the appropriations committees will abide by the figures in the joint resolution remains to be seen. It is our guess that they will, in spite of the fact that the total spending target was some \$30 billion below the sum of the figures submitted by the legislative committees. Additionally, there is the possibility that the President may veto some appropriations and that the vetoes will be upheld in Congress. It is our guess that cuts from the veto process, if any, will be small. The spending targets are not exactly representative of an "austerity" budget, but they are about \$10 billion less than the Congressional Budget Office calculates will be needed to maintain the current level of government services.

Again, congressional changes in the non-defense portion of the budget will have their primary impact in calendar 1977, but some (especially cuts proposed by the President that will not be made) will affect spending in the last half of this year. On balance, we expect defense spending in 1976 to be slightly higher than we forecasted last fall, and nondefense spending to be slightly lower (both after adjustments for revisions in the GNP accounts).

If our guesses regarding congressional action prove to be correct, the federal budget will continue to exercise a stimulative effect on business activity into 1977, but a diminishing one. Federal GPGS will rise by about 8.5% from fourth quarter of 1975 to the same quarter in 1976—less than the anticipated rise

total GNP. Meanwhile, transfer payments will rise by a larger percentage, but the total deficit will decrease. The "high employment surplus" (the estimated surplus with given tax and expenditures programs at a constant 4% unemployment level), which was about minus 9.6 billion (preliminary estimate) in the first quarter of 1976 will approach zero or a plus quantity early in 1977. Thus, continuing stimulus to business recovery must come primarily from the private or the state and local sectors of the economy.

We are disposed to revise downward somewhat our previous estimates of state and local GPGS. The financial problems of New York, our growing realization that certain other large cities are also in potential trouble, has bred a mood of financial conservatism nearly everywhere. State and municipal governments are taking advantage of the increase in tax revenues derived from increased consumer spending, not to increase their own spending proportionately, but to improve their financial positions. Further, state legislatures find it necessary to assume that federal revenue sharing, scheduled under present law to expire on January 1, 1977, will in fact expire on that date, even though it is a virtual political certainty that it will be extended.

In the past four quarters, real (constant dollar) state and local GPGS have risen only 1.8%, a figure well below the 5 to 8% increases of the late 1960s. The 2.8% increase was larger than the 1.3% increase of the previous year when state and local governments were badly squeezed by double digit inflation, but except for that year, it is the lowest percentage increase since 1951—another sudden inflation year.

It is our estimate that state and local governments will continue to economize—that their total spending for goods and services will increase, in current dollars, by about 8.5 to 9% this year (fourth quarter 1975 to fourth quarter 1976), of which roughly 6% will be due to inflation and 2.5 to 3% will be real.

BUSINESS FIXED INVESTMENT



Until quite recently, business fixed investment has made only a very sluggish response to the recent turnaround of the economy. The rate of inflation so far this year has been lower than expected, and the labor force has absorbed more than 700,000 new members in first quarter 1976 with no increase in the rate of unemployment. Reduced inflation and rising output have triggered a boost in consumer confidence and consumer spending, and under normal conditions of recovery these factors are reflected in sharply higher business fixed investment. Furthermore, the liquid funds available for plant and equipment expansion are now much more readily available, as nonfinancial firms are awash in funds as the result of sharply higher first quarter 1976 profits.

However, business fixed investment has shown surprising sluggishness in the face of these favorable economic events. Part of the unwillingness of firms to commit themselves to plant expansion is the fact that U. S. manufacturing firms are still operating at well below full capacity, as well as below their preferred operating levels of about 90% of capacity. Many firms are waiting to see if the recovery continues on its present course; many remember being burned in 1974, when the demand for durables fell off sharply. Earlier survey results (November 1975) of anticipated plant and equipment spending gave rather poor prospects for business fixed investment. Both the McGraw-Hill Survey and the SEC/Department of Commerce Survey showed no planned increase in real spending, and indicated that business planned to increase outlays on plant and equipment by about 5 to 6%, which was at least equal to expected inflation at the time. More recent survey results indicate increased spending plans, so that real outlays on plant and equipment are expected to be up by 3 to 4% in

1976. Business spending on capital outlays has shown moderate increases in real terms in the revised data for the first quarter of 1976, the second consecutive quarterly increase for business fixed investment.

We anticipate that a moderate, fairly balanced and broadly based capital spending boom will develop later this year. Two leading indicators point to more expansive capital spending in the future: both new orders for capital goods and manufacturers' capital appropriations have turned upward in the first quarter of this year, and this generally indicates a continued capital boom. The 1975-76 recovery appears to be a three-stage affair. The upturn in consumption spending—the first stage—has triggered an inventory accumulation boom—the second stage—with resultant increases in plant operating levels and in absolute employment levels. As some firms and industries approach optimal operating levels, they will begin to plan ahead for additional capacity to increase output further. Thus, a capital investment boom may provide the third-stage boost to the economy.

RESIDENTIAL CONSTRUCTION



The residential housing market is continuing the modest upturn that was anticipated late last year. The housing market is more than 40% ahead of its 1974-75 trough, although it is still a long way from attaining the levels of activity it reached in 1972 and 1973. Almost all of the recovery in housing has taken place in the single-family dwelling unit market, which has reached preslump levels. Single-family housing was running over a million units as of mid-1976, and will continue to show strength over the remainder of the year.

The slump continues for multifamily housing, and apartment starts are running only at about half the level of two years ago, with no signs of any major recovery in 1976. The slump in condominium and apartment house construc-

tion activity is a continued response to the overbuilding of speculative units in 1972 and 1973. The inventory overhang of incomplete and unsold condominium homes has declined to about 150,000 unsold units, which is some improvement on the quarter million unsold units on the market a year ago. Some of these vacant units were sold and the remainder were converted to rental units in those regions where rental demand was strengthening. There are many facets to the current slump in multifamily housing. Basic to the situation is the fact that rent payments have not kept pace with increases in construction and maintenance costs, which surged during the double-digit inflation in 1974-75.

Improvement in the multifamily dwelling unit market will take place only gradually, and with a very uneven geographical impact. The speculative boom in multifamily units that took place in 1972 and 1973 was centered around resort and retirement regions in Arizona, Colorado and particularly in Florida. These areas are currently the weakest in terms of effective demand, with a continued overhang of unsold units expected to persist throughout 1976.

The demand for single-family units has picked up sharply, as contrasted to the extremely depressed level of starts a year ago. However, single family housing starts have a long way to go if housing is to return to its 2.4 million start rate that existed in 1973. Consumer confidence has improved, and there has been a strong market for existing homes throughout the last year (July 1975 through June 1976). A strong used-house market is critical for a housing boom, since the majority of households must sell their existing home before they have the effective demand for a new house.

Financial conditions are currently good for the housing market. Thrift institutions have experienced record inflows of savings over the first half of this year, and most of these financial institutions are as liquid as they have been in many years. Mortgage money will continue to be abundant over the rest of the

ear, so that supply conditions can support a much higher level of housing activity.

The short-run future of housing rests on demand conditions, and effective demand for housing has been crimped lately by the rapid increase in house prices. The median price for new single-family dwelling units earlier this year has been reported to be \$42,300, up nearly 2% over the last year. The housing inflation has been caused by continued rises in labor and construction costs, together with escalating land costs in metropolitan fringe areas. These high prices have in effect rationed the middle and low income households (and even quite a few of the upper middle income groups) out of the new housing market.

As real incomes of households continue to limp, and as contractors increase their offerings of no-frill housing, the single-family housing market should strengthen. We expect housing starts to continue their modest improvement throughout the remainder of the year, with about 1.5 million starts taking place in 1976.

INVENTORIES

the last recession could be tagged with a brief descriptive name, it could be labeled an "inventory recession." Inventories fell off very sharply in the first half of 1975, as firms succeeded in offloading nearly \$50 billion of unwanted inventories. Inventories continued to decline throughout the remainder of 1975. The strong economic recovery of the first quarter of 1976 was in large measure due to inventory accumulation, as firms increased inventories of all sorts in anticipation of higher expected future sales.

Business inventories started rising in January of 1976 and this increase continued through the entire first quarter. Inventory accumulation is expected to continue throughout the year. The building up of inventories is a contributing factor to the economic recovery

since it requires increased production and employment. Higher inventories also indicate that the business sector has greater confidence in the economic recovery, since firms are stockpiling inventories of all sorts—manufacturing, wholesale and retail inventories are all rising. The greatest proportionate increases in inventories are coming at the retail level, in both durable and nondurable goods. Even with the pickup in inventories, the level of sales is rising even faster, so that the total business inventory/sales ratio has declined slightly. This lends support to the view that inventories will continue to rise.

Even though the major increase in inventories is at the retail level, manufacturing inventories should start picking up later this year. Firms are operating at higher proportions of plant capacity, and it is normal to stockpile raw and semifinished products to insure that there will be a minimum of resource bottlenecks in the production process. However, many firms remember the excess stockpiles of raw material inventories they built up in 1974, and the costs of holding these excess inventories, so there should be a great deal more caution about stockpiling this year. Nevertheless, strong demand for output at all levels will result in continued inventory accumulation throughout the year.

NET EXPORTS



At year-end 1975, our forecast of the net export sector indicated that the U. S. trade balance would remain positive throughout 1976, but that the record merchandise trade surplus recorded in 1975 would not be repeated. Net exports for first quarter 1976 ran to \$8.2 billion, down sharply from the \$21.7 billion of fourth quarter 1975, although the net export sector exceeded our first quarter forecast of \$7 billion made late last year. Our earlier forecast of a positive but declining net export position throughout the year still appears likely.

Net exports do not normally benefit from an economic recovery, since improving economic conditions generally trigger an increase in import demand. Furthermore, the net export sector is generally contracyclical. When U. S. income rises 1%, demand for imported products rises about 1.8%. This is a definite contrast to the rest of the world's demand for our products, which goes up about 1% when income in the rest of the world rises 1%. The contrast between the income elasticity of demand for exports as contrasted to import demand makes the net export sector decline when national income in the United States rises.

U. S. imports rose sharply during the first quarter of 1976, according to schedule, reflecting the strong increase in domestic economic activity. The major increases in imports came in machinery and transport equipment, rather than in petroleum products. There was a rapid turnaround in the domestic demand for automobiles, and even though foreign car sales as a proportion of total car sales declined, the absolute increase in auto imports was over \$600 million.

Import demand should continue to climb throughout 1976 as industrial activity continues to increase. The outlook for the net export sector, therefore, hinges on export demand. Our export position will mainly be affected by the extent to which our major trading partners continue their economic recoveries. Britain, Canada, France, Italy, Japan and West Germany are all experiencing economic recovery, although the situations in Britain and Italy are still shaky. About half of our exports go to Canada plus the developing countries that are not members of the OPEC. No strong recovery is expected this year in these latter regions. However, West Germany and Japan, and to some extent France, are recovering from their 1975 economic lows and their imports of our products should increase substantially. Our exports will not keep pace with the record levels of 1975. Exports of agricultural products were off about 8% in value and 6% in volume from year-end levels, mainly as the result of a cutback in grain sales to the Soviet Union.

In summary, our trade balance will continue to deteriorate throughout 1976, but net exports should remain positive throughout the year. Imports will rise throughout the year with exports up more slowly. If the OPEC cartel raises petroleum prices later this year, they may, there will be further declines in our net export surplus.

PERSONAL CONSUMPTION EXPENDITURES



Virtually every analyst of the causes of the current recovery notes that it has been "consumer-led" recovery. This conclusion is correct, but it tells only half of the story. What did consumers lead the recovery?

The initiating cause was the tax cuts made in the spring of 1975. This tax legislation had two effects: first, it put money in people's pockets. As usual, after a relatively short lag, that money burned holes in their pockets. Second, it reversed the psychology of the winter of 1974-75. Government was acting as if Government had reversed its position, from clamping down on business activity and urging consumers to save rather than spend in order to fight inflation, to positive action to stimulate the recovery.

A second cause was the subsidence of double-digit inflation. The two primary blows that triggered double-digit inflation had been the oil embargo followed by the quadrupling in the price of oil and the two poor crop years of 1973 and 1974. The 1975 crop was a good one. Inflation had unpredictable effects on consumer spending. Sometimes consumers spend more, to get the jump on rising prices, as they did in 1950-51. At other times, especially where inflation is accompanied by rising job uncertainty, they balk. They refuse to spend in fear of declines in their income or actual unemployment. In the spring of 1975, when these fears gave signs of receding and the inflation rate dropped, consumer spending turned upward again.

Third, consumers had been warned for a decade of impending raw material and energy shortages, of a stoppage of economic growth. These warnings were largely ignored, until the oil crisis hit. For the first time, shortages became a reality, not only of gasoline but of many products dependent on energy. Perhaps doomsday really was just around the corner! By early 1975, however, these shortages disappeared. Oil was plentiful; the fact that it was made plentiful by a major increase in the proportion of our oil consumption coming from abroad was not recognized by the typical consumer. The recession itself solved the problem of other shortages. Consequently, the doomsday fears abated. Confidence in our long-run future was restored, inappropriately, perhaps, but effectively for the nonce.

Fourth, and here we have a two-way causation phenomenon, the rise in employment restored consumer confidence. We say two-way because increased consumer buying led to higher employment, but because more people were employed, they could spend more, and persons who had been employed all along spent more because they had less fear of unemployment. In any event, the circle of rising employment and rising spending was self-reinforcing.

From the first quarter of 1975 to the same quarter of 1976, consumer spending rose by 9.6%, well above the 6.1% inflation rate. Will it continue?

The momentum of the recovery is such that consumer spending is likely to continue to rise, in the absence of untoward exogenous developments such as a prolonged strike in the automobile industry. It is true that the indexes of consumer confidence have dropped a bit in the past few months, but these are not very reliable leading indicators. Consumer saving is still above the long-run average 5 to 7% saving rate. As long as the inflation rate remains moderate, the saving rate should, at the least, not rise. If the tax cuts are extended beyond June 30, as they no doubt will be, a negative influence on consumer spending will be avoided.

If, however, the inflation rate does rise significantly, as we suggest that it may, the rise

in consumer spending may taper off, and it seems unlikely that we will get the lift from strongly rising consumer spending for goods and services other than automobiles that we have had in the past six to nine months.

AUTOMOBILES

In our last forecast, we projected a recovery in the automobile industry but we said "we do not see a real boom for at least a year." We may not be having a "boom" this year, but it looks like an awfully loud "pop." New car sales have been strong this spring and there is little indication of a letup. Domestic auto sales for the first four months of 1976 were up 40% over the similar period in 1975. April and May could well have been stronger had the production mix been more in line with consumer demand. Standard and intermediate sized models have been in relatively short supply while smaller models have been more than plentiful.

Two clouds could darken this rather bright automobile picture before the year is over: one is the current strike within the rubber industry and the other is a potential strike in the automobile industry itself. All domestic manufacturers are now shipping new cars without the spare tire in order to lengthen the supply of tire inventory. However, even with this practice, the industry can go only until about mid-June before it is significantly affected by the rubber strike. This is also the year for new labor contracts in the auto industry and, of course, a strike right at the time of new model introductions could have a significant influence on the last quarter of this year.

If we rise above these two clouds, we see a very strong remainder of 1976 and an even stronger 1977. Sales in May (average daily selling rates) were 29% higher than last year when auto sales had already started to pick up. Buyer preference continued to be particularly strong for the intermediate and full-sized models.

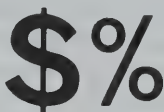
We have already read a great deal about the redesigned 1977 standard size models to be

offered by General Motors. There is every indication that this change could result in one of the most exciting new car announcement periods in many years, which would undoubtedly stimulate the entire industry and bring about a very strong fourth quarter. In addition, strong consumer acceptance of the new 1977 GM models could serve as a catalyst for a real boom in the industry, amplified by the pent-up demand of the last few years. For the first time, consumers will have the opportunity of purchasing an American-made automobile that will be full standard size on the inside and yet comparable to the current intermediates on the outside. In addition, the cars will be nearly 1,000 pounds lighter than their 1976 counterparts with the resulting improvement in gasoline mileage.

We can expect a price increase on the 1977 models, but most industry sources feel it will be in the 4-5% range. Of course, new labor contracts will help to determine the accuracy of these expectations.

All things considered, we are optimistic about the automobile sector and have adjusted our forecast accordingly. There are strong indications we could see that boom next year and even as early as the fourth quarter of 1976.

PRICES AND INTEREST RATES



The current consensus forecast of economists, especially government economists, for interest rates and prices seems to be that the inflation rate will rise only moderately during the remainder of the year, perhaps to a 6% annual rate. Long-term interest rates will remain steady or decline slightly, and short-term rates (measured by the ninety-day Treasury bill rate and the federal funds rate) will rise slightly from the late May level of around 5.5%, to something less than 6%. It is our judgment that this conservative forecast may prove to be in error for several reasons.

It is true that the inflation rate was well below 6% in the first quarter of 1976. The

mid-May revision of the GNP deflator shows a increase from 129.3 to 130.5, a seasonally adjusted annual rate of 3.7%. The consumer price index (CPI) from December 1974 to March 1975 rose at a seasonally adjusted annual rate of only 2.9% (3.7% without seasonal adjustment) and in April the annual rate increase was still only 4.8%. This good behavior, as we explained in the November-December edition of this *Review*, was to be expected for two reasons. First, in the early stages of a business recovery, productivity gains are typically higher than average because output can be expanded in a slack economy without a proportionate increase in employment. Wage increases can therefore be made without an equal increase in final product prices. Second, industry in general was operating at only about 70% of capacity, which meant that competitive pressures were strong.

The 2.9% first quarter annual rate increase in the CPI was indeed better than we expected. Two other factors contributed to the low inflation rate in the first quarter. First, the provisions of the energy legislation passed by Congress in late December actually reduced ceiling prices for domestic "old" petroleum. Also, with the memory of the oil crisis fading, coal prices receded. Second, an increase in cattle slaughter led to a decline in beef prices at the retail level. The 2.9% (annual rate) consumer price index increase in the first quarter reflected a 2% decline in food prices and a 2.1% decrease in energy prices. Minus these two components, the CPI was up at a 7.1% annual rate from the preceding quarter.

Both of these declines are temporary. Beef slaughter is expected to be below demand and current prices for the remainder of the year and indeed even since mid-March, cattle prices at the wholesale level and beef prices in the supermarket have turned upward. The effect of the energy legislation have already had their impact. Two developments could cause fuel prices to turn upward again. One is an increase in consumption of gasoline, which shows signs of rising this summer. The second is an increase in the price of oil from the OPEC countries (and

increase was temporarily postponed at their meeting in late May).

Further, the benefits of rising labor productivity will diminish as the recovery progresses. This fact, coupled with strong labor demands for wage and other benefit increases to recompense labor for past increases in the cost of living, mean that unit labor costs are likely to rise much more sharply than they did early in the year. The Teamster's Union settlement, clearly an inflationary one, may be a precedent.

Capacity utilization rates are rising again, as might be expected, though on average the rise in the total index has been moderate. The disturbing element in this picture, however, is that capacity utilization rates in major materials industries is now above 80% and rising steadily, with relatively little new capacity scheduled to come on stream in 1976. A few basic industries are already at or near the 90% preferred operating rate, which is likely to result in scattered materials shortages, as in 1973-74, before many months have passed.

The combination of rising unit labor costs and price increases of basic commodities portends higher final product prices. Moreover, business firms will try to finance internally further expansions in prices by raising their profit margins, especially in industries where capacity shortages seem imminent. The 9.6% April increase in the wholesale price index (WPI), while not necessarily representative of likely increases in subsequent months, is symptomatic of the inflationary forces already at work. Especially significant is the fact that the "crude materials" component of the WPI rose at a 16.2% average annual rate in March and April.

Chairman Arthur Burns of the Federal Reserve testified before Congress to the effect that the "underlying inflation rate" in the United States is between 6 and 7% a year. We concur in this estimate. Consumer behavior, labor union demands, administered price setting by business firms and long-term interest rates all lend evidence to the widespread conviction that inflation of this magnitude is built into the system. It is not a "demand-pull" inflation; aggregate demand is clearly not in excess of

potential output. It is an "inflation breeds inflation" phenomenon. The wage-cost-price spiral will keep it going as long as the recovery progresses.

It is our judgment that the 6% figure is at the bottom end of the probability range for the inflation rate. The upper end, especially if there are adverse events such as a poor harvest this summer, is probably short of the double-digit level, but not much.

Interest rates are predominately influenced by three forces: (1) the demand for borrowed funds, which in turn is related to the level of business activity, especially inventory investment and capital spending including home building, plus changes in the size of the federal deficit; (2) the supply of loanable funds, which is affected by personal and business saving (undistributed profits and depreciation allowances) but more significantly in the short run by Federal Reserve policy as it affects bank reserves; and (3) the anticipated inflation rate. The latter is more influential in determining long-term rates than short-term rates.

During the 1973-74 recession, both businesses and consumers improved their liquidity positions appreciably. The personal saving rate (net personal saving as a percent of disposable personal income) held well above the historical 5 to 7% rate, reaching 9.9% in the second quarter of 1975. Even in the first quarter of 1976, it had fallen only to 7.6%. In spite of an inflation-induced rise in current dollar personal income, consumer installment credit outstanding rose by very small amounts: 2.4% in 1975, for example, compared with 16.3% in 1973. Business firms improved their cash positions, chiefly by liquidating inventories. Also, rising corporate profits, after the first quarter of 1975, accompanied by only a negligible increase in dividend payments, added to cash flow. Thus, in the early stages of the current recovery, both businesses and persons have been relatively liquid. They are in a position to spend without borrowing. The demand for funds has therefore been low.

If the recovery continues, however, both of these trends will be reversed, sooner or later. As noted earlier, business firms have now shifted

from inventory liquidation to accumulation. Capital expansion, to be sure, has lagged, but will eventually turn upward, and in the fourth quarter of last year and the first quarter of this year rose in current dollars (though not in constant dollars). Consumers are loosening their purse strings, and the saving rate is likely to drop into its normal range. When it does, it will both increase the demand for funds (installment credit) and reduce the supply.

Whereas interest rates are not necessarily correlated with the level of, or the rate of change in, business activity (witness, for example, the record high interest rates of 1974), an increase in total spending and therefore in the demand for funds, other things being equal, does tend to push rates upward. On this ground alone, therefore, we look for an upward tendency in interest rates later in the year. Indeed, they already turned upward in May.

An offsetting tendency will be the decline in the federal deficit, the result not of a decline in expenditures but of an increase in tax revenues as personal incomes and corporate profits reflect the rise in business activity. For the remainder of 1976, however, the decline will be small compared with the rise in business demand for funds, especially if the tax cuts are extended beyond June 30, as seems virtually certain.

The crucial variable is Federal Reserve policy. Chairman Arthur Burns announced on May 3 what was described as a "small and technical" change in policy with respect to the money supply. The upper limit on the target for annual rate of growth in M_1 (demand deposits plus currency outside banks) was changed from $7\frac{1}{2}\%$ to 7% , and for M_2 (M_1 plus bank time deposits other than large certificates of deposit) from $10\frac{1}{2}\%$ to 10% . Largely overlooked in the press was the shift in the starting base, from the fourth quarter of 1975 to the first quarter of 1976. This change had the effect of dropping the target range, both upper and lower limits, very substantially. In recent weeks, actual M_1 has been above the upper limit of the new target range, and M_2 is approaching its upper limit. If the Federal

Reserve means what it says, a tightening of monetary policy is in prospect. Already, small steps in that direction have been taken.

As we said in our forecast of late last year, a rate of growth in current dollar GNP of at least 12% (6% real growth plus 6% minimum inflation) is needed if any meaningful progress is to be made in lowering the unemployment rate and in closing the current, yawning gap between actual and capacity GNP. Many economists doubt that, after the initial stages of recovery when velocity of circulation of money is normally high, a 12% rate of growth in GNP can be financed with a 4 or even a 7% increase in the money supply.

If the demand for funds continues to rise strongly, which we have suggested is likely, the Fed will be faced with a Hobson's choice. It may stick with its policy of restricting the growth in the money supply and allow (or force) interest rates upward and run the risk of choking off the recovery—in an election year. Or it may yield on its policy and permit growth in the money supply, which, in our stated judgment, would increase the risk of inflation in later months.

We do not pretend to be expert Fed watchers, but it is our guess that in the next several months, at least, the Federal Reserve will try to steer what it considers to be a middle course. It will allow the money supply to rise above the target range, but will at the same time pursue a tight enough reserve policy to keep the money supply within "tolerable" limits. Interest rates, especially short-term rates, will go up. The only question is how much. It is our guess that a Treasury bill rate as low as 6% in late summer or autumn is not likely.

In the meantime, if our forecast of a rise in the inflation rate proves to be correct, long-term rates and even medium-term (three to ten years) rates will reflect this rise. Long-term rates will also be influenced by the rise in short-term rates; there are no walls between money and capital markets. Adding these two influences together, we anticipate that rates on high-grade corporate bonds, currently around 8% , will exceed 9% before the end of the year.



The Indiana Economy

Introduction by Morton J. Marcus, Research Economist, Division of Research

The national economic recovery of 1975-76 detailed in the foregoing pages is reflected in the following statewide and local reports. Indiana's economy has advanced with the national recovery and the outlook is generally favorable for continued economic improvement in the remainder of 1976. The clouds on the national horizon do, however, have particular significance for this state. Threats of strikes in transportation equipment or electric component manufacturing have serious direct and direct implications for our sensitive state economy. Continued and improved consumer spending as well as business investment are the preconditions of a strong economic advance to 1977.

One year ago, during April 1975, Hoosiers had to contend with widespread high unemployment rates. On a statewide basis, in April 1975, that rate was 9.8%. This April the rate was down to 5.9% (6% when adjusted for seasonal factors). One year ago, four of the state's eleven major metropolitan areas had unemployment rates in excess of 10%; there are no major metropolitan areas today with such high rates of unemployment. In April 1975, forty-one of the sixty-two nonmetropolitan counties had double-digit unemployment rates; this year in the same month only six counties still had such high unemployment rates.

In April of this year, we had 96,000 fewer persons unemployed than in April 1975, but this progress was attained only in part by an increase in employment. Nearly 56,000 more persons hold jobs this year compared to the employment figures of a year ago. At the same

time, more than 40,000 persons left the state's labor force during the year. Thus, 42% of the decline in the number unemployed was a result of men and women leaving our state's labor market. Some of these people may have left the state temporarily and will return as the economy continues its advance. Others may have taken early retirement or withdrawn from the labor market to await new opportunities. In addition, some potential entrants into our labor force, students and women re-entering the labor market, may have chosen to wait to look for jobs until the demand for labor increases and job seeking efforts are more rewarding.

The pattern of employment growth in the state is diverse and, in most respects, particularly indicative of the strong recovery we have experienced. Overall, employment in non-agricultural activities has increased by 3.2% above the level of April 1975. In manufacturing, employment has moved ahead by 5.8% with substantial gains in electric machinery (15.4%) and autos and automotive parts (13.9%). The primary metals group, the steel industry in this state, shows no increase in employment compared to a year ago. The reluctance of plants to release skilled workers, even when overall output is down, contributes to this fact. Raw steel production in Indiana is nearly 3% above its 1975 level even though production nationally is below the 1975 level. This fact, shown in the latest issue of the *Data Supplement* to this *Review*, is consistent with the shift in production of steel to Indiana plants and the steadily increasing relative importance of Indiana in steel production nationally.

Percent Change in Total Personal Income
by Quarter and for the Year 1975

	Quarter				Year
	75: I	75: II	75: III	75: IV	1975
United States	0.9	1.7	3.1	2.6	8.0
Indiana	0.5	1.1	4.7	2.4	7.3
Illinois	0.6	1.8	3.7	2.4	7.7
Kentucky	0.4	0.8	3.7	1.5	6.3
Michigan	-2.3	3.4	3.9	4.4	6.8
Ohio	-0.1	2.1	2.8	2.5	6.9

SOURCE: U. S. Department of Commerce, Bureau of Economic Analysis.

Observers of the state’s economy should be encouraged by the data which reveal that the growth in public sector employment (3.4%) is close to the average level of increase (3.2%) during the past twelve months. The growth in public employment could have been greater, given the influx of federal funds to provide temporary, countercyclical jobs. Earlier in the recovery, public sector employment growth reduced the impact of the layoffs in the private sector. At this time it appears that the employment recovery is well balanced throughout the various sectors of the state’s economy. In twelve of the state’s fifteen manufacturing sectors, man-hours in industrial production is above year-ago levels. In thirty-three of thirty-six cities for which industrial electricity production is reported in the *IBR Data Supplement*, output is higher this spring than it was in the spring of 1975.

The encouraging national outlook for business fixed investment and consumer expenditures, notably autos, indicates that Indiana’s economy will continue to provide employment opportunities and further increases in personal income. The overall outlook for Indiana’s personal income in 1976 suggests continued advances consistent with the national rate of growth. Agricultural price and harvest levels, as anticipated at this time, suggest that the farm earnings component will provide a strong contribution to personal income for 1976. For the year 1975, Indiana lagged the national growth

in personal income, as indicated in the accompanying table. The Hoosier state outperformed all of its neighboring states except Illinois in 1975, but only in the third quarter did we exceed the national rate of growth in personal income. The differential effect of the recession on individual states also reduced Indiana’s relative standing in terms of per capita personal income. Whereas per capita personal income increased nationally by 16.1% between 1973 and 1975, in this state per capita income increased by only 13.1%. In 1973, twenty-two states exceeded our \$4,929 per capita income level; our slower growth during the economic turbulence of the past two years left twenty-six states ahead of Indiana in 1975. Per capita personal income for Indiana in 1975, in current dollars, was \$5,587.

In the following pages major individual areas of Indiana are examined by author, residing in each region. All of us who analyze the economy of the state rely on the important state and local data generated by the research and statistics section of the Indiana Employment Security Division. We had also come to depend on the informal guidance and considerable wisdom of Dwight Kelley. Mr. Kelley’s death a few weeks ago leaves our lives poorer, but his contributions to economic understanding in Indiana during a long and distinguished career with IESD have permanently enriched our state.

INDIANAPOLIS

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How well is the Indianapolis economy recover-
ing? Relative to the state and national econo-
mies, Indianapolis is lagging. However, if the
previous recession-recovery (1969-71) is exam-
ined, Indianapolis lagged the Indiana and U. S.
economies then also, as shown in Table 1.¹
Using the fifth quarter from the trough of the
1969-71 recession as a basis for a forecast, we
would expect expansion in the fifth quarter
(April, May and June) in the current recovery.

TABLE 1

Total Nonagricultural Employment

1969-71 Recession (Trough of Feb. 1971 = 100)		
	4th Qtr. from Trough	5th Qtr. from Trough
United States	102.6	103.8
Indiana	101.4	103.2
Indianapolis	100.2	100.9

1973-75 Recession (Trough of March 1975 = 100)	
	4th Qtr. from Trough
United States	102.1
Indiana	101.8
Indianapolis	100.1

1. The most complete available data base for local
analysis is the unadjusted monthly employment levels
by industry collected by the Indiana Employment
Security Division. The national counterpart for the
local employment series is the U. S. Department of
Labor, Bureau of Labor Statistics publication, *Em-
ployment and Earnings*, Table B-2.

When we disaggregate nonagricultural employ-
ment into its manufacturing and nonmanu-
facturing components, we observe a contrast
between the two recessions. In the recovery of
the most recent recession, the manufacturing
sector has been the source of strength but in
the earlier recession nonmanufacturing pro-
vided stability. Perhaps one reason for the
contrast is the severity of the most recent
recession in the manufacturing sector. For
example, in the trough of the current business
cycle (March, April and May 1975), manu-
facturing employment in Indianapolis fell to
88% of what it was at the peak of the cycle in
November of 1973. (During that same period,
Indiana manufacturing employment fell to 83%
of its former level; the United States figure was
88% of its previous level.) Thus, the strength
exhibited currently by the manufacturing sec-
tor must be interpreted in the context of a
recovery from a relatively low level.

How far has the Indianapolis economy
recovered from the business cycle peak of
November 1973? The Indianapolis economy is
compared to the Indiana and U. S. economies
using employment indexes in Table 2.

In March 1976, Indianapolis' total non-
agricultural employment was 95.5% of that in
November 1973. The cyclical nature of manu-
facturing and the countercyclical nature of
government are suggested by these indexes.
Disaggregation of the nonmanufacturing sector
indicates that employment in wholesale and
retail trade in both Indianapolis and Indiana has
been lagging the United States. This lag is due
in part to the severity of the recession in
manufacturing which reduced income available
for expenditure locally, and to the relatively
large manufacturing employment in Indiana.

Some interesting questions arise from these
data: How quickly will Indianapolis regain the
employment levels in manufacturing achieved
in November 1973, the peak in the business
cycle? In the longer run, has Indianapolis'
comparative advantage been affected by events

TABLE 2

Employment by Sector in March 1976
(Nov. 1973 = 100)

	Total Nonagricultural	Manufacturing	Non- Manufacturing (includes gov't.)	Government
United States	98.8	91.0	101.6	108.7
Indiana	94.2	86.1	99.1	107.4
Indianapolis	95.5	89.8	97.7	109.4

that were initiated during the cycle—such as the higher price of oil?

The Indianapolis Business Activity Index provides evidence of a recovery in the state capital. This weighted index computed by the Indiana National Bank shows an increase in activity from 197.2 in January to 208.9 in March. Electric energy sales for Marion County for residential, industrial and commercial classifications showed increases in the first quarter 1976, compared to the first quarter 1975.

The evidence from construction is mixed. The total number of housing unit starts in the first quarter of 1976 has increased compared to the fourth and first quarters of 1975. The total value of residential permits (single, double and multifamily units) increase 134% between first quarter 1976 and first quarter 1975. However, the total value of building permits decreased 54% between first quarter 1976 and first quarter 1975. At the end of March, the total under construction was 38% less than at the end of March 1975, and 17% less than at the end of December 1975. Therefore, it appears that the expansionary phase of the housing cycle has begun with evidence provided by single-family units. With vacancy rates for apartments relatively high, expansion in multifamily construction will lag single-family construction.

What about the next two quarters? The analysis uses an expenditure approach—

consumption, investment and government expenditures. Consumption expenditures depend on real disposable income and disposable income depends, in part, on tax changes. The Revenue Adjustment Act passed in December 1975 extended the ongoing provisions of the Tax Reduction Act of 1975 through June 30, 1976. The nature of the extension is uncertain at this time. Consumption expenditures for durables, such as automobiles, have been a source of strength during the recovery. This reporter talked to persons in the transportation equipment industry and learned that most of the employees who were laid off had been recalled. However, there was little expectation of significant net increases in employment—with the exception of summer replacements. The message was similar in the consumer electronics industry.

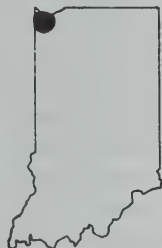
Investment consists of three categories—inventory change, new plant and equipment, and residential construction. The banking sector indicates there is beginning to be some evidence of loan demand for inventory accumulation and new plant and equipment. However, because of the recent experience nationally with poor quality loans there will be a “quest for quality” in extending loans which could act as a constraint on the magnitude of the recovery in investment. Significant completed investment projects include a plant addition at the Detroit Diesel-Allison Division, an adminis-

trative services building at Eli Lilly, an Engineering and Technology Building at IUPUI and several warehouses. Significant new investment projects include three apartment complexes, the Indiana Central University Library and Park 100 warehouses. A continuing project is Merchants Plaza in downtown Indianapolis.

The local government sector may not show the expansion exhibited a year ago because federal funding of youth summer employment positions is considerably less this summer. Though it appears that there is still some distance to travel in the recovery, our projection is for continued expansion at a moderate rate.

GARY-HAMMOND-EAST CHICAGO (Calumet Area)

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We estimated last December that the modified Illinois Bell index of industrial activity for northern Indiana would stand at about 120 at the end of the first quarter of 1976. The index was 116.6 in March (from a 111.8 in January), and with a slight acceleration in the economy it may approach 125. This basically follows our prediction, though we must admit that our data had indicated a slightly sharper upturn than appears to be currently in progress. The area is still about 12% below the eight-year trend.

In the Gary-Hammond-East Chicago area, an average of 10% of the work force had been laid off during the past recession (as high as 34% in some small manufacturing plants). White collar layoffs averaged only .2%. Local firms anticipate hiring or rehiring, on the average, 4.2% in blue collar jobs and .44% in

white collar jobs in the next quarter. On the average, firms expect sales, in current dollars, to rise 8.03%, prices to rise 4.91% and wages to edge up 4.33%. Inventories have been estimated to be .33% below desired levels, thus some buildup is anticipated.

We asked our resource panel of 252 firms to indicate whether they were planning on the basis of an excellent, fair, uncertain or a poor business recovery. We coded the responses on a scale of four and obtained a mean of 2.16. Thus, local businesses appear to exhibit somewhat cautious attitudes about recovery—probably more cautious than is warranted. Panelists believe this year's national elections will have a minor effect on the economy.

The small business sector of the local economy will undertake new capital investment and increase its labor force at a somewhat slower rate than the rest of the economy. Rising wages and about a 3% increase in real sales will yield a solid, sustainable, but generally moderate recovery in the retail sector. A slight improvement in profit margins may stimulate some net new investment, particularly in the eastern section of the SMSA where most of the new expansion in steel is likely to take place. In the third and fourth quarters of 1976 and into 1977, the local payroll will expand, which will stimulate additional business activity and—unless prices and interest rates surge—an expansion in both commercial and residential construction. Thus, we expect the business index to reach about 135, that is, a level 2 points below the long-run trend, by about the middle of the second quarter of 1977. The road will be somewhat bumpy, with a few mild retreats in the fourth quarter of 1976.

The employment picture may continue to be mixed. The number of two-worker families will increase as females reenter the labor force during recovery. The number of unemployed, one-worker or hardcore units will not change much; thus the fruits of recovery will not be evenly spread.

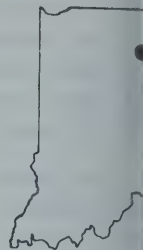
A recent study of local steel plants indicates that productivity in the continuous caster and sintering plants at Bethlehem's Burns Harbor is still below expected levels. Moreover, owing to the relatively high level of underemployment at the older mills during the recession, recovery will not correspondingly raise employment. There are several reasons for underemployment during slowdowns in manufacturing. One is the "consent decree" governing the mills' affirmative action plans, under which females and minorities are being inducted into the labor force. It appears that supervisors tend to retain an excessive proportion of their experienced work force, particularly in maintenance and service, in order to mitigate the effect on productivity of inexperienced workers with difficult work habits. Another reason is that supervisors in the old mills are fearful of losing their experienced work force to the new mills in Portage, in the event of temporary layoffs. Finally, supervisors tend to consider high supplemental unemployment benefits as demoralizing and costly; consequently they prefer in-plant work sharing to transfer payments.

Some of the area's leading indicators, particularly the ratio of output to manufacturing capacity, have lagged the nation. This ratio has been advancing since mid-1975, however it is still below 1973 levels for the region. Shortages in local manufacturing capacity are not expected, particularly if an anticipated 6% increase in local capital formation materializes.

There is one exception to the relatively undisturbing local inflation forecast: medical costs, which rose at rates of 1-2% higher than the national price increases in drugs, doctors' and dentists' fees and hospital charges, will continue to outstrip national rates in 1976-77. Steel price increases will continue, of course, but will not be comparable to the 1974 period, when the wholesale iron and steel index rose from 144 to 194 in a single year, while the output index for melted steel declined from 126 to 119.

FORT WAYNE

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The end of the precipitous decline in economic activity in the Fort Wayne area occurred around October 1975 and a significant expansion from that base was forecasted for the first half of 1976. It now appears that the expansion will be concentrated in the second quarter of 1976, as local economic activity has moved sideways for the previous two quarters. October 1975 payroll employment in the Fort Wayne SMSA was 149,500; for April 1976, the tentative figure is 149,700. The seasonally adjusted unemployment rate for April 1976 was a nominal rate of 7%, compared to 8.5% for October 1975. The unemployment rate is misleading in that the decrease in unemployment has resulted from a continued contraction, now approximating 8,000, of the labor force rather than an expansion of employment. This contraction, combined with a recession-induced decrease in employment of approximately 10,000, gives an employment shortfall of approximately 18,000 persons in the Fort Wayne area, from the peak of the last expansion.

The basis for the economic expansion is well founded. The most volatile component of local employment is durable goods manufacturing. New orders for durable goods, which precede changes in employment, have risen from \$35.5 billion in October 1975 to \$48 billion in March 1976, an increase of 35%. The gain is principally real, given that wholesale prices have risen 1.1% for the comparable period, with a large portion of the gain attributable to farm-product price increases.

Another component of durable goods activity which relates even more directly to economic activity in the Fort Wayne SMSA is manufacturer sales of motor homes. Motor home sales peaked in January 1973 at a seasonally unadjusted rate of 14,000. Sales have now recovered from a January 1974 low of 4,000 to a current rate of 12,750 for each of the months in the first quarter of 1976.

The upsurge in new orders for durable goods is a reflection of the growing confidence of the nation's consumers. This confidence is mirrored locally by the newly developed Index of Consumer Outlook, designed to measure consumers' willingness to buy products and services. It is based upon a telephone survey of a sample of persons residing in the Fort Wayne metropolitan area. Respondents are asked how they perceive their current financial position, expected financial position, buying of major household items, employment status and confidence in making future purchases. The differences between the positive and negative responses to each question are added to compile the index.

The index of consumer outlook, which stood at 100.0 in November 1975, registered a substantial increase to 120.8 in March 1976. The favorable consumer outlook should manifest itself in a healthy increase in retail sales at the local level. The outlook for consumer durables such as refrigerators, television sets and automobiles is particularly favorable. It appears that consumers who had reluctantly postponed the purchase of such items due to falling real incomes during the past eighteen months are now back in the market. In November 1975, 26.1% of those surveyed felt disinclined to buy major household items; by March 1976 only 16% felt disinclined. Furthermore, 66% of the respondents in the March 1976 survey felt that the main wage earner in the family would not be laid off, compared to 60% in November 1975.

All of the statistics point to a significant upturn in the local economy for the last six months of 1976. Short of some economic catastrophe, the expansion will occur because of the momentum already gathered. Local department store sales for February were up 15% from a year ago, which was near the trough of the recession, and down 5% from two years ago, which was near the peak of the last expansion. (The February figures were adjusted for inflation.)

Two potential economic catastrophes deserve consideration. First is the possibility of prolonged labor contract disputes. Locally, B. F. Goodrich, General Electric, International Harvester, Phelps Dodge, Rea Magnet Wire and Indiana Rod and Wire are among those companies having major contracts to be renegotiated in 1976.

The second potential catastrophe is a new round of crude oil blackmail. The United States has failed to establish an energy policy that could ultimately hasten the demise of the OPEC cartel, and U. S. energy consumption, after stabilizing in 1974-75, has resumed its long-term advance, and dependency on OPEC crude has spurted. The lack of a national energy policy encourages increased effectiveness of the cartel in the short-run. An embargo on crude oil is more than an economic decision, and, if exercised, the impact on the local economy will likely be more deleterious than the last embargo.

Whether the forecasted expansion of the local economy continues through the first half of 1977 depends primarily upon interest rates and associated inflationary expectations for the last half of 1976. The success of the Federal Reserve to facilitate economic recovery thus far without renewing double-digit inflation will hopefully continue through at least the next six months, although it must endure the usual economic rhetoric associated with a presidential election.

EVANSVILLE

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The Evansville region has been in a recovery phase since June 1975, with minor fluctuations. Third quarter 1975 showed a good gain of about 6% in terms of the Evansville Area Business Index (see the attached table). The momentum of recovery was temporarily lost in the fourth quarter which registered a decline of about 3%. The first quarter of 1976, however, showed a remarkable upturn from the previous quarter. The composite index rose 7% in January, 4% in February and 4.3% in March. The average of the first quarter amounted to 124.21, which exceeded the annual average of 1973, the best year in the last two decades.

The degrees of recovery in various sectors have not been uniform. Trade and service industries were the first to show signs of recovery. These industries were stagnant in

1974 but picked up activities slightly in 1975 and made a marked growth in the first quarter of 1976. Favored by unseasonably warm weather, the sales of automobiles and other durable goods increased tremendously. The construction industries have showed a small but steady increase since August 1975. The residential construction index rose 22% in January alone. Business construction rose 7.7% in February, reflecting motel construction, a new restaurant and a hospital expansion project.

Industrial production regained momentum in the first quarter, especially in March 1976, when the index for this sector reached 144.3, a new high since July 1973. Most of the workers who were laid off in 1975 were recalled in the first quarter this year. A sudden increase in the inbound railroad carloadings indicates a further growth in industrial production. The revival of financial activities also was impressive in the first quarter. Although the bank lending activities remained solid, there was a substantial increase in the amount of bank debits which may mean a higher level of spending by households, business firms and governmental institutions.

Only moderate growth has been observed in transportation and employment. The employment index in the first quarter was still below the 1974 level, but it is expected that this

Evansville Area Business Index (1967-1969 = 100)

Period	Industrial Production	Trade and Services	Con- struction	Trans- portation	Finance	Employ- ment	Composite Index
1973	132.83	116.75	125.56	110.61	157.55	104.16	123.63
1974	126.26	111.88	112.64	101.72	192.00	102.44	119.16
1975 I	118.67	115.65	85.32	87.98	206.44	99.22	114.43
1975 II	115.84	110.40	79.23	84.77	193.77	98.44	110.44
1975 III	127.90	112.51	82.73	90.02	189.76	100.49	116.58
1975 IV	119.56	111.80	85.08	81.38	196.16	100.39	112.92
1976 Jan.	122.29	123.38	101.42	80.67	206.42	100.73	119.23
1976 Feb.	127.96	128.26	105.16	87.35	213.80	101.69	124.06
1976 March	144.39	121.89	103.15	90.14	227.95	101.96	129.35

overall improvement of the regional economy should add a stimulus to employment. The unemployment of the Evansville region was below the national and Indiana levels in the first quarter, the March rate being 5.1% (seasonally adjusted).

The prospects for 1976 look much better now than they did at the end of 1975. If the trends in the first quarter are sustained, the year 1976 should be a very prosperous year for the Evansville region, equalling or even surpassing the economic performance of 1973.

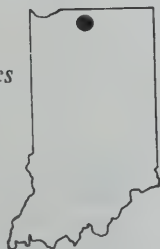
SOUTH BEND-ELKHART

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Research Assistant



A comparison of unemployment rates suggests that the South Bend-Elkhart economy continues to recover faster than most areas of the state and nation. The unemployment rate in South Bend decreased from 6.7% in September 1975 to 5.5% in February 1976, while the Elkhart rate decreased from 7.4% in September to 5.8% in February. For the same period, Indiana's statewide unemployment rate declined from 8.7% to 6.4%, and the United States unemployment rate declined from 8.6% in September to 7.6% in February.

The accompanying table shows that eight of the ten South-Bend Elkhart area economic indicators have improved from September 1975 through February 1976. Specifically, commercial and industrial natural gas sales have improved, the former by 6%, and the latter by 13%. Total spending, as measured by bank debits, new car sales and new truck sales, has also improved. Bank debits are up 13% from September through February, and new car sales

and new truck sales have improved by 4% and 8% respectively. The help wanted index is up 43%, but total nonagricultural employment has only increased about .5% from September through February.

Two local indicators showed negative changes from September 1975 through February 1976. Although both December and January industrial electricity sales showed a 5% increase when compared with September, sales declined by 3% during the period. This was because February 1976 was one of the warmest on record for the area, so less electricity was needed to heat facilities. This is confirmed by the substantial drops in both commercial and industrial natural gas sales from January to February.

New housing starts, which buoyed the local economy during 1975, have fallen off considerably. The new housing index, which was at 224.7 in September, fell below 200 for the first time in six months in November, and was at 174 for February, a 23% decline from September. This housing slump may be due to the Associates Corporation's move to Dallas, Texas. South Bend realtors estimate that approximately 150 homes will go on sale as a result of the move; most of those homes were placed on the market during March and April. This one-time increase in supply could affect the rate of new home construction in South Bend during 1976. Except for housing, the local economic indicators suggest that the South Bend-Elkhart economy continues to recover from its trough in the second quarter of 1975.

Most major employers in South Bend are in full production, although a few slow areas exist. Associates Corporation will move its headquarters to Dallas during August and September, costing the local economy 550 jobs. A couple of strikes are affecting current economic activity, but these should be temporary problems. One large local employer has lost one of its major customers and several hundred jobs may be lost if these lost sales cannot be made up.

Selected Economic Indicators for the South Bend-Elkhart Area, Sept. 1975–Feb. 1976
(1967 = 100, seasonally adjusted)

<i>Indicator</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	<i>Jan.</i>	<i>Feb.</i>
Industrial electricity	118.6	118.7	119.8	124.2	123.7	114.9
Natural gas sales						
Commercial	137.1	137.7	105.3	130.8	150.9	144.9
Industrial	95.5	102.0	93.0	108.3	116.9	107.5
Bank debits	226.0	218.9	233.0	234.1	234.5	255.2
Nonagricultural employment	106.4	105.9	106.0	106.2	105.7	106.5
Help wanted index	58.5	56.6	64.7	67.4	71.4	83.8
Unemployment rate (percent of work force)						
South Bend	6.7	7.1	5.9	5.1	5.4	5.5
Elkhart	7.4	8.0	7.6	6.9	6.8	5.8
New passenger car sales	108.1	113.4	109.3	110.8	109.2	112.0
New truck sales	191.4	210.6	200.0	204.6	201.6	206.8
Estimated value of new housing permits	224.7	264.5	195.4	192.3	233.0	173.8

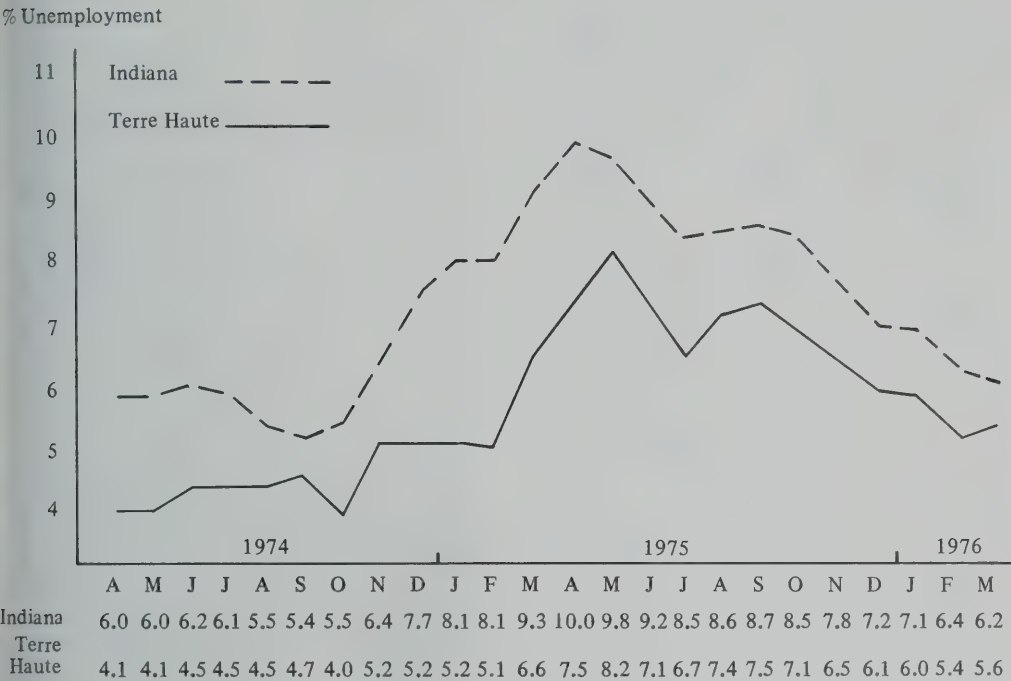
SOURCE: *South Bend Area Economic Indicators Monthly Bulletin*, Bureau of Business and Economic Research, Indiana University at South Bend.

On the brighter side, construction has started on a downtown convention center. If this center is successful, the downtown hotel and retailing industries will be given a boost. Several other large projects, such as a suburban shopping mall, a downtown retailing complex and an airport expansion, are in various stages of development, although to our knowledge, final confirmation has not been worked out and construction has not started. Finally, the rapid expansion of the Elkhart economy will assist the South Bend recovery.

The recreational vehicle industry is experiencing substantial growth and the mobile home industry might be in full production by this summer. Since these two industries are very important to the Elkhart economy, we anticipate the rapid expansion of the Elkhart economy to full employment. The Elkhart unemployment rate fell from 5.8% in February to 4.6% in March, and it appears that the April rate will be in the neighborhood of 4%.

In our December 1975 forecast, we identified the national recovery as the major uncertainty facing our local economy. Fortunately, national consumer demand remains strong and most forecasts anticipate strong consumer demand for the rest of 1976. Interest rates remain relatively low and most economists anticipate a moderate rise in rates during the remainder of 1976. Inflation has moderated substantially in the first few months of 1976 and prices are predicted to increase by about 5-6% for 1976 as a whole. Most of the current uncertainty surrounding the South Bend economy comes from local employers and local projects, although there appears to be a reasonable balance between the good and bad news. Consequently, we forecast a continued moderate expansion of the South Bend economy for the remainder of 1976. Prospects for Elkhart are much better: we expect a rapid improvement in the Elkhart economy to a full employment position by May or June, and a continued high level of economic activity throughout 1976.

Indiana-Terre Haute Unemployment, April 1974–March 1976 (Seasonally adjusted)



SOURCE: Indiana Employment Security Division.

TERRE HAUTE

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In the November-December outlook edition of the *Indiana Business Review* I suggested that the local economy had undergone a structural change over the last decade or so as it developed a more diversified industry structure and a reduced sensitivity to fluctuations in aggregate

economic activity. For example, the wholesale and retail trade sector and the government sector, which typically experience less employment variation, are now the two largest employers in the region. As a consequence, the unemployment rate in the region has been below that of the state, whereas traditionally, it had been above it. On this basis, I suggested that not only did the local economy enter the recovery in a better position than did the state, but that its recovery level might be above that of the state. As the accompanying figure indicates, this has been and continues to be the case. Unemployment declined from 8.2% in May 1975 to 5.6% in March of this year. Although the differential between the Terre Haute SMSA and the Indiana unemployment

rates has declined, the local unemployment rate was at least 1% lower than that of the state until the most recent month, March 1976.

A continued expansion of employment in the region can be expected. However, several areas that were soft in November 1975 are likely to remain soft for the balance of 1976. Employment in construction, fabricated metals and, to a lesser extent, in the transportation, communication and utility sectors remains below the May 1975 levels.

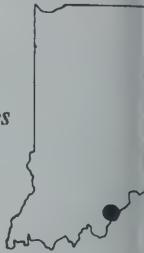
The region's fabricated metals industry is related to business fixed investment. To the extent that investment by firms lags during the recovery, employment in the fabricated metals industry is likely to remain depressed for the balance of the year. If business fixed investment picks up in the fourth quarter, there may be some improvement by the end of the year.

Some plant construction is going on in the region. In Clay County, a manufacturer of drain tile is beginning construction of a facility which may eventually employ up to 300 people. In Vigo County, a pharmaceutical manufacturer has undertaken an expansion of warehouse facilities, and a coal mine is more than doubling its capacity. A new plant has recently been completed by a container manufacturer in Vermillion County. Residential construction is expanding in the area and at least one multi-family complex is scheduled for construction. However, a return to anything approximating full employment in the construction industry would require a general return to investment in plant and equipment. Given the increase in business investment to date and present rates of capacity utilization nationally, it is unlikely that there will be much improvement in this area until the latter half of the year, more probably in the fourth quarter.

If the U. S. economy continues to expand, it is likely that local economic activity and employment will continue to improve. It is probable that the unemployment rate for the region will be in the neighborhood of 5% by the end of 1976.

JEFFERSONVILLE-NEW ALBANY (Louisville Area)

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Southeastern Indiana and the Louisville area continue their economic recovery, with a particularly strong advance in recent months. As in the rest of the nation, this region's economy began turning upward a year ago, but employment remained depressed throughout 1975.

The Louisville area business activity indexes in Table 1 give some indication of the pattern of recovery. After a gradual improvement during the last three quarters of 1975 and early 1976, industrial output turned up strongly in March and April of 1976, exceeding the prerecession level of two years ago. The trade and services index, which registered moderate gains during 1975, also rose sharply in April, as both new car sales and department stores sales soared.

TABLE 1
Index of Louisville Area Business Activity
(1967 = 100, seasonally adjusted)

	April 1974	April 1975	October 1975	April 1976
Industrial production	127.6	106.2	112.1	134.1
Transportation	152.3	143.3	152.6	161.4
Trade and services	118.9	119.1	122.4	132.0
Construction	138.5	112.7	127.2	106.7
Financial	231.5	256.1	271.0	281.1
Employment	121.4	114.1	116.4	115.4
Composite index	137.9	130.0	136.0	147.1

SOURCE: Research Department, Louisville Area Chamber of Commerce.

TABLE 2

Employment in Nonagricultural Establishments, April 1974–April 1976

	<i>April 1974</i>	<i>April 1975</i>	<i>April 1976</i>	<i>Change since April 1974</i>
Clark and Floyd Counties				
Total employment	41,400	40,100	37,900	– 3,500
Manufacturing	15,200	11,800	9,900	– 5,300
Durable goods	11,500	8,700	6,600	– 4,900
Nondurable goods	3,700	3,100	3,300	– 400
Nonmanufacturing	26,200	28,300	28,000	+ 1,800
Construction	1,300	1,600	900	– 400
Service and misc.	4,500	4,700	5,700	+ 1,200
Government	8,300	8,900	9,100	+ 800
All other	12,100	13,100	12,300	+ 200
Louisville Metropolitan Area*				
Total employment	367,100	345,000	347,800	–19,300
Manufacturing	120,300	103,200	105,400	–14,900
Durable goods	75,000	60,300	60,400	–14,600
Nondurable goods	45,200	42,800	44,900	– 300
Nonmanufacturing	246,800	241,800	242,500	– 4,300
Construction	17,900	15,000	12,800	– 5,100
Trade	78,500	76,300	75,100	– 3,400
Services	57,700	58,800	60,700	+ 3,000
Government	49,100	49,800	51,000	+ 1,900
All other	43,500	42,000	42,800	– 700

*Includes Floyd and Clark Counties in Indiana; and Jefferson, Oldham and Bullitt Counties in Kentucky.

SOURCES: Indiana Employment Security Division; and Kentucky Department of Human Resources.

Construction—which declined, picked up and declined again during 1975—made impressive gains in March and April. After a year of record sales of existing homes, new housing permits also began to rise sharply throughout the metropolitan area. (Because the construction index is based on a four-month moving average which includes construction industry employment as well as housing permits, it will take another month or two for the index to reflect fully these gains.) Apartment vacancies

are falling, and this may give further impetus to residential construction in the months to come.

The moderate upturn in 1975 was accompanied by a substantial amount of actual or planned capital expenditures. At least 50 manufacturing firms and 130 nonprofit and commercial enterprises announced plans for local establishment or expansion. These plans call for an estimated \$100 million in new investment and the eventual creation of some 1,500 jobs.

Employment conditions continue to cloud the otherwise bright economic picture. Employment for both Clark and Floyd Counties and the metropolitan area as a whole remains well below the 1974 level. The April 1976 employment level of Clark and Floyd residents was still lower than it was in April 1975, and throughout the metropolitan area unemployment remained virtually unchanged from the year earlier level. Since January 1976, the unemployment rates have declined, reflecting a mixture of expected seasonal gains, the departure of discouraged workers from the labor force, and modest permanent improvements in employment. Although the decline is encouraging, the April unemployment rates of 7.8% for the area as a whole and 8.6% for Clark and Floyd Counties are still disturbingly high. Furthermore, these rates probably understate the extent of unemployment, since many who have exhausted their unemployment benefits and still lack jobs have apparently left the labor force, or have simply not been counted. In April 1976, Clark and Floyd Counties registered 400 fewer labor force members than in April 1974, and there were 4,700 fewer members in the total metropolitan area.

Manufacturing employment bore the brunt of the recession's impact, as can be seen in Table 2. April employment in Clark and Floyd manufacturing firms was 1,900 workers below the year earlier level, and 5,300 lower than in April 1974, with job losses concentrated in the durable goods industries—particularly in wood products, furniture, machinery, transportation equipment and ordnance manufacture. In contrast, nonmanufacturing employment in the two Indiana counties has continued to expand, reaching record levels. Most of the gains occurred in service or government employment. For the metropolitan area as a whole, there were significant job losses in both manufacturing and nonmanufacturing, but again, durable goods industries suffered the greatest employment declines and government and service occupations recorded increases.

Despite the employment lag, we can be quite optimistic about economic conditions in this region for the remainder of 1976. Production, retail sales and construction activity should all continue to expand fairly rapidly throughout the metropolitan area. With the improvements and a more robust national economy as well, employment will also increase. More than half of the 1974-76 job losses should be recovered this year, although manufacturing employment in the Indiana counties will probably rise more slowly.

MUNCIE

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After the nation's economy turned downward in November 1973, in what was to be the most serious recession of the post-World War II era, Muncie's unemployment did not reflect much visible distress until near the end of 1974. Unemployment in Muncie then soared and double-digit levels became generally the rule from 1975, averaging 10%. According to January 1976 seasonally adjusted data, unemployment declined to 8.8%, and by March unemployment had receded to 7.1%. However, these figures should be viewed with the knowledge that the Muncie SMSA labor force decreased by 2,600 workers in the year ending March 1976. The disinterested worker effect and a reduction in the number of entrants into the labor force probably explain some of the decline in the labor force. As the local economy continues to improve, however, it is probable that many of these disinterested workers and delayed entrants will move back into the labor force, which will tend to retard the downward trend in unemployment.

Muncie's unemployment level has historically tended to remain high long after the nation's economy is well on the mend, and presently there appears to be little evidence to the contrary. General Motors' Delco battery division is constructing a new plant in Muncie's Industria Centre, but it is not expected to add directly to the employment totals—indeed, it probably will not absorb all the employees of the plant it is replacing. Currently, some of the Delco battery plant layoffs have been shifted to the Delco-Remy plant in Anderson, thereby lowering Muncie's unemployment figures. Warner Gear, formally Muncie's largest employer, has been making marginal additions to its workforce and will probably continue to do so for the balance of 1976. However, the T-50 five-speed transmission, an important product of Warner's, is designed for compact cars which have been selling well below forecast levels. Likewise, a sizeable portion of General Motors' Chevrolet plant production is oriented toward the compact market.

Muncie's machine tool shops are not hiring; owners report that their order spindles are resting from nonuse as salesmen scurry for orders. However, they do report an increase in quotation requests—generally a harbinger of better times.

Given the structural changes in the nation's labor force, an analysis of employment, not unemployment, data can provide additional information about the impact of the business cycle on Muncie's cyclically sensitive SMSA. Utilizing some of the data presented by Professor Robert Kirk of IUPUI in his recent Indiana Economic Forum speech, relative comparisons of the impact of cyclical changes on the employment levels of the United States, Indiana, Indianapolis and Muncie are made in Table 1. Although the Muncie data are not exactly comparable to Professor Kirk's, they do suggest that the cyclical downswing has been relatively severe for Muncie and that recovery from the March 1975 trough has been painfully slow.

TABLE 1

Total Nonagricultural Employment
November 1973 = 100 (business cycle peak)

	<i>4th Qtr. after Peak</i>	<i>6th Qtr. after Peak</i>	<i>9th Qtr. after Peak</i>	<i>March 1976</i>
United States	100.7	96.8	98.6	98.8
Indiana	99.8	92.5	93.9	94.2
Indianapolis	101.5	95.8	96.0	95.5
Muncie SMSA	99.0	91.0	91.4	91.8

Table 2 shows that manufacturing activity was only 92.5% of what it was in the base year 1967. This relative decline in manufacturing is mirrored by structural changes in the employed labor force. Muncie's employed labor force averaged 49,300 in 1968, and as of March 1976 had risen to only 49,600. Although these figures reflect miniscule differences, they mask significant structural changes: manufacturing employment declined 21%, services employment was up 24% and government employment registered a hefty 36% gain since 1968. These significant changes in the employment mix have thus taken place with a modicum of growth in the employed labor force and with a similarly low rate of growth for the Muncie SMSA, when viewed from the perspective of the Muncie Business Composite Index, which currently registers 111.9 over its 1967 base.

TABLE 2

Muncie Area Business Index
(1967 = 100)

<i>Sector</i>	<i>Feb. 1976</i>	<i>Jan. 1976</i>	<i>Feb. 1975</i>
Manufacturing	92.5	89.5	87.0
Trades and service	123.2	120.7	124.2
Government	151.8	150.8	141.7
Other areas	128.0	130.4	130.4
<i>Composite index</i>	<i>111.9</i>	<i>110.0</i>	<i>108.3</i>

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Pradeep Bansod, Gladys Huang, Judy Norman and Gad Toledano

UNITED STATES—INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES			INDIANA		
	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT						
Nonagricultural employment	March 119.2	119.0	116.1	March 110.6	110.3	108.6
Manufacturing employment	March 96.8	96.5	93.7	March 94.0	92.4	91.5
Average weekly hours (no.)	March 40.0	40.0	38.7	March 40.8	40.7	38.6
Average weekly earnings (\$)	March 202.80	201.60	182.66	March 238.68	236.87	207.67
Nonmanufacturing employment	March 128.7	128.5	125.7	March 121.87	122.2	120.0
Unemployment rate (%)	March 7.5	7.6	8.5	March 6.2	6.4	9.3
Unemployment rate—married males (%)	March 4.1	4.1	5.0	—	—	—
Continued unemployment claims	—	—	—	March 210.5	199.2	455.2
PRODUCTION						
Bituminous coal production	Feb. 107.0	111.6	120.3	March 130.3	108.1	87.3
Industrial electricity production	Dec. 139.2	138.8	137.0	—	—	—
Industrial electricity sales	—	—	—	Feb. 131.2	136.0	133.1
Manufacturing production	March 119.9	119.3	107.7	Feb. 129.3	124.7	119.8
Raw steel	Feb. 96.5	89.6	106.3	Feb. 124.5	120.9	127.7
CONSTRUCTION						
Construction activity—total	Jan. 180.5	180.3	170.8	Feb. 169.3	165.0	161.9
Residential housing starts	March 112.4	121.6	76.7	Feb. 169.2	76.0	96.7
Residential expenditures	Feb. 194.6	192.6	151.8	Feb. 210.4	211.3	209.1
Nonresidential expenditures	Jan. 174.6	173.9	178.1	Feb. 142.0	130.5	145.2
Public expenditures	Jan. 170.7	169.4	160.2	—	—	—
Public works and utilities	—	—	—	Feb. 146.1	154.1	117.3
OTHER INDICATORS						
Debits to demand deposits	Feb. 354.6	328.2	320.4	—	—	—
Bank debits	—	—	—	Feb. 339.2	309.8	331.7
Personal income per capita (\$)	Feb. 6,186.7	6,129.7	5,651.2	1975 IV 5,831.50	5,697.20	5,345.70
Passenger car sales (thousands)	March 947.0	758.0	670.0	Feb. 19.8	16.4	18.9
Year to date (thousands)	March 2,384.0	1,437.0	1,932.0	Feb. 36.2	16.4	33.6

NOTE: The Spendable Average Weekly Earnings by County reported in the April issue of the *Data Supplement* were for the SECOND quarter 1975, not the first quarter. Please make this change on your copy.

SOURCE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

Information appearing in the *Indiana Business Review Data Supplement* unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

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UNITED STATES BUSINESS INDICATORS

Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rate</i>		
	<i>1976 1 Qtr.</i>	<i>1975 4 Qtr.</i>	<i>1975 1 Qtr.</i>	<i>1976 1 Qtr.</i>	<i>1975 4 Qtr.</i>	<i>1975 1 Qtr.</i>
Gross national product (GNP)	1,616.3	1,572.9	1,433.6	11.5	12.1	-2.1
GNP (\$ 1972)	1,238.4	1,216.2	1,158.6	7.5	5.0	-9.2
GNP potential level (\$ 1972)	1,388.8	1,375.2	1,335.3	4.0	4.0	4.0
Government purchases	348.4	344.8	321.2	4.2	13.4	8.9
Personal consumption expenditures	1,028.7	1,001.0	926.4	11.5	10.0	8.2
Private domestic investment	229.6	205.4	168.7	56.1	23.4	-58.6
Corporate profits before tax*	133.8	129.5	123.9	14.0	105.2	-49.1
Business inventories	265.9	264.4	267.3	2.3	-1.0	24.0
Federal surplus—deficit (NIA)*	-71.5	-70.5	-25.5	—	—	—

*Data are for preceding quarter.

*Data are for preceding quarter.

	Current Levels or Annual Rates				Percentage Change at Annual Rates			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index†	March	167.6	167.2	157.9	March	2.9	.7	4.5
Consumer price index—food†	March	177.9	179.4	170.6	March	-10.0	-11.3	-3.5
Wholesale price index†	March	179.4	179.0	170.2	March	2.7	-4.6	-6.1
Money supply (\$ billions)	March	298.4	296.8	284.1	March	6.7	6.3	9.8
Money supply plus time deposits	March	681.7	676.9	623.0	March	8.8	15.1	9.7
Mobile home shipments (thousands)	Jan.	263.0	228.0	185.0	Jan.	454.9	-18.8	-46.8
Mortgages—outstanding (\$ billions)‡	Feb.	282.4	280.1	250.8	Feb.	10.4	6.1	5.5
Mortgages—new issues (\$ billions)‡	Feb.	49.8	47.3	27.3	—	—	—	—
Mortgage rate—new homes	March	8.9	8.9	9.1	—	—	—	—
Prime rate business loans	March	6.8	6.8	7.9	—	—	—	—

†Base period, 1967 = 100.

‡ All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION

Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>March 1976</i>	<i>Feb. 1976</i>	<i>March 1975</i>	INDIANA	<i>March 1976</i>	<i>Feb. 1976</i>	<i>March 1975</i>
Manufacturing	95.3	95.5	88.8	Manufacturing	95.2	93.6	87.6
Food	93.0	94.5	91.3	Food	82.9	84.9	85.5
Apparel and textiles	97.0	97.3	79.4	Apparel and textiles	95.4	97.0	74.2
Lumber and wood	99.1	101.3	85.5	Lumber and wood	93.6	91.9	88.1
Furniture	103.8	104.7	86.8	Furniture	101.3	101.4	85.6
Paper	97.8	98.5	88.8	Paper	91.4	90.1	80.2
Printing	100.0	99.7	100.1	Printing	95.2	96.4	93.2
Chemicals	103.1	102.9	98.3	Chemicals	103.5	103.8	103.0
Petroleum and coal	111.9	110.6	103.7	Petroleum and coal	72.0	72.2	69.7
Rubber	120.6	118.8	102.7	Rubber	111.5	107.5	85.4
Stone, clay, and glass	96.3	97.6	93.2	Stone, clay, and glass	89.6	94.2	85.1
Primary metals	86.0	85.5	88.4	Primary metals	92.2	90.1	92.2
Fabricated metals	99.4	98.9	94.1	Fabricated metals	104.0	105.4	100.1
Nonelectrical machinery	100.4	100.3	103.9	Nonelectrical machinery	98.5	96.4	101.8
Electrical machinery	92.9	91.7	88.6	Electrical machinery	96.1	93.7	79.5
Transport equipment	91.7	89.1	80.2	Transport equipment	100.8	96.4	81.9

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	Feb. 1976	Jan. 1976	Feb. 1975	REPORTING CITIES	Feb. 1976	Jan. 1976	Feb. 1975
ANDERSON				FORT WAYNE			
BD*	200.7	177.5	155.6	BD	295.0	292.3	265.9
CUC†	159.6	233.4	640.9	CUC	347.7	402.6	599.1
IES‡	148.4	140.3	128.3	IES	100.2	101.4	120.5
BEDFORD				FRANKFORT			
CUC	100.6	115.7	260.9	CUC	375.6	451.4	951.5
IES	160.6	133.9	112.9	IES	166.5	176.5	151.2
BLOOMINGTON				GARY			
BD	248.8	370.8	263.5	BD	243.8	234.4	262.7
CUC	214.3	179.2	501.1	CUC	142.0	175.7	228.3
IES	108.0	100.7	91.1	IES	169.4	159.8	137.8
COLUMBUS				GOSHEN			
BD	281.7	297.7	246.2	BD	278.9	243.5	223.6
CUC	140.7	184.1	264.9	IES	182.1	167.8	148.1
IES	154.3	133.4	148.4	HAMMOND §			
CONNERSVILLE				IES	167.7	155.0	160.8
BD	209.4	201.5	188.1	HUNTINGTON			
CUC	151.2	163.7	342.1	CUC	407.3	431.6	768.0
IES	135.8	123.5	136.9	IES	128.5	133.3	128.7
CRAWFORDSVILLE				INDIANAPOLIS			
BD	277.9	290.9	271.8	BD	453.1	401.6	471.5
CUC	855.3	1,004.6	800.9	CUC	96.5	92.2	471.4
IES	167.9	160.0	147.1	IES	143.3	136.9	142.9
EAST CHICAGO				JEFFERSONVILLE			
BD	228.4	191.7	214.7	BD	338.7	302.8	276.8
CUC §	211.7	301.3	180.9	IES	129.1	131.9	127.5
IES	84.3	80.8	104.1	KOKOMO			
ELKHART				CUC	162.0	138.3	831.1
BD	280.8	259.5	205.3	IES	178.1	152.9	157.9
CUC	190.2	201.4	726.6	LAFAYETTE			
IES	141.0	145.3	142.6	BD	229.9	206.5	214.9
EVANSVILLE				CUC	402.7	488.1	576.6
BD	221.3	207.1	205.6	IES	135.6	123.6	143.4
CUC	140.2	192.8	362.0	LA PORTE			
IES	129.6	116.7	115.0	CUC	340.3	376.2	375.0
				IES	219.5	162.8	184.2
				LOGANSPOUT			
				BD	336.9	298.8	299.3
				CUC	102.5	127.8	296.7
				IES	218.5	227.8	171.5
				MADISON			
				BD	269.2	223.5	211.0
				CUC	231.2	269.8	235.8
				IES	129.5	106.1	113.8
				MARION			
				BD	93.0	87.3	175.7
				CUC	158.5	186.3	445.2
				IES	115.6	114.1	111.4
				MICHIGAN CITY			
				BD	258.5	264.8	259.3
				CUC	278.8	375.0	380.9
				IES	165.0	174.1	166.4

INDIANA IN PERSPECTIVE

Per Capita Personal Income, 1974

State and Standard Metropolitan Statistical Areas

	Amount 1974	Percent Change 1973-1974	Relative to State Level
Indiana	\$5,190	+5.3	100.00
Anderson	5,205	+4.0	100.29
Bloomington	4,038	+5.7	77.80
Cincinnati	5,637	+10.2	108.61
Evansville	5,060	+6.2	97.50
Fort Wayne	5,637	+7.6	108.61
Gary-Hammond			
East Chicago	5,296	+10.7	102.04
Indianapolis	5,762	+7.5	111.02
Lafayette-W. Lafayette	4,924	+6.5	94.87
Louisville	5,455	+8.1	105.11
Muncie	4,819	+9.8	92.85
South Bend	5,283	+6.9	101.79
Terre Haute	4,502	+7.1	86.74

SOURCE: U. S. Department of Commerce, Unpublished Report, April 9, 1976.

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	<i>Feb.</i> 1976	<i>Jan.</i> 1976	<i>Feb.</i> 1975	REPORTING CITIES	<i>Feb.</i> 1976	<i>Jan.</i> 1976	<i>Feb.</i> 1975
MISHAWAKA				SOUTH BEND			
BD*	150.7	132.2	239.2	BD	246.1	211.5	197.3
IES‡	113.7	134.6	138.8	CUC	190.1	197.7	384.6
MUNCIE				IES	101.2	108.7	98.0
BD	277.5	254.5	244.8	TERRE HAUTE			
CUC†	129.0	164.6	358.0	BD	223.5	217.0	218.4
IES	109.4	106.2	93.9	CUC	237.4	251.1	283.4
NEW ALBANY				IES	147.5	153.5	158.0
BD	266.6	201.5	396.4	VALPARAISO			
CUC	776.5	1,063.5	701.1	CUC	248.7	234.7	223.7
IES	101.9	102.2	97.3	IES	176.0	173.7	166.5
NEW CASTLE				VINCENNES			
BD	288.4	259.9	209.4	BD	252.9	250.7	224.9
CUC	126.3	186.8	582.8	CUC	159.0	168.8	205.3
IES	162.6	143.0	119.7	IES	121.8	117.6	110.6
PERU				WABASH			
BD	238.0	217.7	204.5	BD	199.1	198.1	190.3
CUC	113.8	131.7	317.2	CUC	133.2	226.4	536.5
IES	191.5	188.1	167.9	IES	162.0	166.4	121.8
RICHMOND							
BD	188.6	189.4	209.5				
CUC	304.0	320.3	412.0				
IES	196.3	201.8	202.8				
SEYMOUR							
BD	381.6	329.6	299.9				
CUC	117.3	107.4	273.5				
IES	98.1	105.9	96.2				

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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Cordially,

H. D. David
Administrative Director

(1) Which of the following data are of value to you or your organization?

- A Employment, Production, Construction and Other Indicators (from page one)
for the United States _____ for Indiana _____
- B United States Business Indicators _____
- C Man-Hours in Industrial Production _____ for the United States _____ for Indiana
- D Indiana Local Indicators of bank debits, continued unemployment claims and industrial electricity sales _____

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- _____ seasonally adjusted, annual rates
- _____ seasonally adjusted, index numbers

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June 1976

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Pradeep Bansod, Gladys Huang and Gad Toledano

UNITED STATES-INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA			
EMPLOYMENT		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Nonagricultural employment		April	119.8	119.3		April	111.2	110.6
Manufacturing employment		April	97.5	96.9		April	95.0	94.0
Average weekly hours (no.)		April	39.1	40.0		April	39.5	40.8
Average weekly earnings (\$)		April	197.45	202.40		April	232.26	239.09
Nonmanufacturing employment		April	129.3	128.8		April	122.2	121.9
Unemployment rate (%)		April	7.5	7.5		April	6.0	6.2
Unemployment rate—married males (%)		April	3.9	4.1		—	—	—
Continued unemployment claims		—	—	—		April	205.9	210.5
PRODUCTION								
Bituminous coal production		March	129.0	117.6		April	126.5	130.3
Industrial electricity production		Jan.	141.5	139.2		—	—	—
Industrial electricity sales		—	—	—		March	149.4	131.2
Manufacturing production		April	121.5	120.6		March	132.5	129.3
Raw steel		March	98.4	96.5		March	122.4	124.5
CONSTRUCTION								
Construction activity—total		March	180.1	173.1		March	178.4	169.3
Residential housing starts		April	106.8	111.5		March	150.2	169.2
Residential expenditures		March	204.8	195.4		March	244.6	210.4
Nonresidential expenditures		March	168.0	162.3		March	147.2	142.0
Public expenditures		Jan.	170.7	169.4		—	—	—
Public works and utilities		—	—	—		March	141.0	146.1
OTHER INDICATORS								
Debits to demand deposits		March	368.7	354.5		—	—	—
Bank debits		—	—	—		March	366.6	339.2
Personal income per capita (\$)		Feb.	6,174.4	6,119.9		1975 IV	5,831.50	5,697.20
Passenger car sales (thousands)		April	914.0	947.0		March	22.3	19.8
Year to date (thousands)		April	3,298.0	2,384.0		March	58.6	36.2

SOURCE: Data on Indiana construction activity from McGraw-Hill Construction Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of the American Iron and Steel Institute,

Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

*Current indicators are preliminary and subject to revision.

Information appearing in the *Indiana Business Review Data Supplement* unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

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UNITED STATES BUSINESS INDICATORS
Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rates</i>		
	<i>1976 1 Qtr.</i>	<i>1975 4 Qtr.</i>	<i>1975 1 Qtr.</i>	<i>1976 1 Qtr.</i>	<i>1975 4 Qtr.</i>	<i>1975 1 Qtr.</i>
Gross national product (GNP)	1,619.2	1,572.9	1,433.6	12.3	12.1	-2.1
GNP (\$ 1972)	1,241.2	1,216.2	1,158.6	8.5	5.0	-9.2
GNP potential level (\$ 1972)	1,402.5	1,388.8	1,348.5	4.0	4.0	4.0
Government purchases	349.2	344.8	321.2	5.2	13.4	8.9
Personal consumption expenditures	1,029.6	1,001.0	926.4	11.9	10.0	8.2
Private domestic investment	232.2	205.4	168.7	63.3	23.4	-58.6
Corporate profits before tax	140.8	132.4	97.1	27.9	9.3	-62.3
Business inventories	267.9	265.9	270.0	3.1	2.3	4.0
Federal surplus—deficit (NIA)	-69.1	-72.1	-53.7	—	—	—

	Current Levels or Annual Rates				Percentage Change at Annual Rates			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index†	April	168.3	167.6	158.7	April	5.1	2.9	6.3
Consumer price index—food†	April	178.9	177.9	171.0	April	7.0	−9.6	2.9
Wholesale price index†	April	180.9	179.4	171.9	April	10.5	2.7	12.7
Money supply (\$ billions)	April	302.3	298.4	284.9	April	16.9	6.2	3.4
Money supply plus time deposits	April	690.1	681.7	626.7	April	15.8	8.7	7.4
Mobile home shipments (thousands)	March	244.0	287.0	199.0	March	−85.7	185.2	−68.3
Mortgages—outstanding (\$ billions)‡	March	286.6	282.5	252.4	March	18.8	10.9	8.0
Mortgages—new issues (\$ billions)‡	March	69.7	49.9	37.3	—	—	—	—
Mortgage rate—new homes	April	8.9	8.9	9.0	—	—	—	—
Prime rate business loans	April	6.8	6.8	7.5	—	—	—	—

†Base period, 1967 = 100

‡All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>April 1976</i>	<i>March 1976</i>	<i>April 1975</i>	INDIANA	<i>April 1976</i>	<i>March 1976</i>	<i>April 1975</i>
Manufacturing	93.2	95.4	88.9	Manufacturing	91.9	95.2	86.7
Food	93.7	93.0	90.9	Food	83.4	82.9	85.3
Apparel and textiles	94.4	97.1	81.7	Apparel and textiles	90.0	95.4	77.7
Lumber and wood	100.7	99.7	86.9	Lumber and wood	98.6	93.6	90.7
Furniture	104.1	104.0	89.0	Furniture	96.8	101.3	83.1
Paper	97.2	98.1	88.6	Paper	85.8	91.7	82.2
Printing	99.2	99.9	99.4	Printing	93.7	95.5	93.2
Chemicals	104.4	103.2	97.9	Chemicals	103.0	103.6	102.3
Petroleum and coal	109.6	110.6	101.8	Petroleum and coal	72.5	72.0	70.5
Rubber	118.8	121.2	105.2	Rubber	107.3	111.5	87.8
Stone, clay, and glass	97.0	96.6	94.1	Stone, clay, and glass	89.3	89.4	89.8
Primary metals	86.3	86.1	85.9	Primary metals	93.5	91.7	88.6
Fabricated metals	97.0	99.9	94.1	Fabricated metals	100.9	104.0	99.1
Nonelectrical machinery	98.8	100.2	103.0	Nonelectrical machinery	95.3	98.4	100.7
Electrical machinery	91.5	93.1	87.7	Electrical machinery	89.4	96.1	79.9
Transport equipment	87.2	91.4	81.5	Transport equipment	95.0	100.9	83.4

INDIANA LOCAL INDICATORS Seasonally Adjusted Indexes Base Period: 1967 = 100

REPORTING CITIES	March 1976	Feb. 1976	March 1975	REPORTING CITIES	March 1976	Feb. 1976	March 1975
ANDERSON				FORT WAYNE			
BD*	199.5	200.7	149.6	BD	325.1	295.0	252.5
CUC†	122.0	159.6	710.5	CUC	309.1	347.7	719.2
IES‡	161.9	148.4	126.9	IES	115.8	100.2	90.6
EDFORD				FRANKFORT			
CUC	92.0	100.6	288.4	CUC	294.8	375.6	1,044.8
IES	163.4	160.6	109.7	IES	176.6	166.5	146.3
LOOMINGTON				GARY			
BD	361.0	248.8	287.4	BD	293.3	243.8	247.9
CUC	197.2	214.3	553.9	CUC	128.0	142.0	233.0
IES	100.8	108.0	90.7	IES	164.6	169.4	134.5
OLUMBUS				GOSHEN			
BD	348.2	281.7	246.0	BD	293.1	278.9	202.5
CUC	106.2	140.7	377.4	IES	159.4	182.1	125.4
IES	169.5	154.3	145.1	HAMMOND §			
ONNERSVILLE				IES	163.3	167.7	152.2
BD	241.8	209.4	184.9	HUNTINGTON			
CUC	118.3	151.2	490.8	CUC	372.8	407.3	1,019.5
IES	146.1	135.8	130.8	IES	121.0	128.5	119.9
RAWFORDSVILLE				INDIANAPOLIS			
BD	308.0	277.9	250.0	BD	478.0	453.1	471.8
CUC	699.4	855.3	1,013.2	CUC	77.9	96.5	522.0
IES	161.3	167.9	146.0	IES	142.5	143.3	138.0
AST CHICAGO				JEFFERSONVILLE			
BD	195.3	228.4	204.8	BD	325.6	338.7	274.1
CUC §	187.5	211.7	202.2	IES	126.9	129.1	130.6
IES	84.4	84.3	96.9	KOKOMO			
LKHART				CUC	94.0	162.0	741.0
BD	298.7	280.8	206.2	IES	200.2	178.1	132.4
CUC	152.5	190.2	812.5				
IES	172.2	141.0	133.8				
VANSVILLE							
BD	233.2	221.3	193.6				
CUC	109.1	140.2	364.7				
ES	133.0	129.6	118.0				

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of
East Chicago and Hammond are combined

INDIANA IN PERSPECTIVE

Per Capita Personal Income, 1973-1975

Current Dollars, Not Adjusted for Price Level Changes

In 1973 per capita income in Indiana was 98.1% of the national level. Two years later, in 1975, the combined differential effects of inflation and recession had reduced Indiana to 95.8% of the national level.

	Amount			National Rank	Percent Increase	
	1973	1974	1975	1975	1973-74	1974-75
United States	\$5,023	\$5,449	\$5,834	—	8.5%	7.1%
Indiana	4,929	5,190	5,587	27	5.3	7.6
Illinois	5,728	6,273	6,750	4	9.5	7.6
Kentucky	4,009	4,442	4,668	45	10.8	5.1
Michigan	5,506	5,880	6,240	11	6.8	6.1
Ohio	5,050	5,516	5,883	19	9.2	6.7

SOURCE: U. S. Department of Commerce News, May 11, 1976.

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	March 1976	Feb. 1976	March 1975	REPORTING CITIES	March 1976	Feb. 1976	March 1975
LAFAYETTE				PERU			
BD*	257.9	229.9	210.6	BD	313.2	238.0	210.6
CUC†	335.8	402.7	762.2	CUC	91.7	113.8	335.8
IES‡	156.7	135.6	144.1	IES	218.4	191.5	156.7
LA PORTE				RICHMOND			
CUC	274.2	340.3	442.2	BD	200.3	188.6	274.2
IES	177.4	219.5	186.1	CUC	272.6	304.0	177.4
LOGANSPOUT				SEYMOUR			
BD	349.8	336.9	295.1	BD	348.1	381.6	349.8
CUC	83.6	102.5	325.1	CUC	95.2	117.3	83.6
IES	239.1	218.5	169.2	IES	110.2	98.1	239.1
MADISON				SOUTH BEND			
BD	262.9	269.2	200.6	BD	268.5	246.1	262.9
CUC	207.7	231.2	378.2	CUC	177.2	190.1	207.7
IES	122.2	129.5	122.1	IES	123.9	101.2	122.2
MARION				TERRE HAUTE			
CUC	146.2	158.5	478.9	BD	255.2	223.5	146.2
IES	131.7	115.6	91.9	CUC	213.3	237.4	131.7
MICHIGAN CITY				IES	166.2	147.5	131.7
BD	297.1	258.5	240.7	VALPARAISO			
CUC	241.2	278.8	451.0	CUC	216.0	248.7	241.2
IES	184.9	165.0	166.1	IES	177.3	176.0	184.9
MISHAWAKA				VINCENNES			
BD	161.2	150.7	242.7	BD	274.8	252.9	161.2
IES	139.1	113.7	126.8	CUC	162.6	159.0	139.1
MUNCIE				IES	135.4	121.8	139.1
BD	314.0	277.5	245.4	WABASH			
CUC	125.2	129.0	358.0	BD	226.1	199.1	314.0
IES	125.0	109.4	91.3	CUC	143.2	133.2	125.2
NEW ALBANY				IES	168.6	162.0	125.0
BD	476.1	266.6	401.8				
CUC	628.0	776.5	762.6				
IES	99.5	101.9	95.9				
NEW CASTLE							
BD	264.9	288.4	217.8				
CUC	105.4	126.3	600.8				
IES	168.3	162.6	115.0				

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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JULY-AUGUST 1976

Indiana Business Review

Saving Interest on Municipal Bonds David S. Kidwell	1
Ode to the Tulip Poplar Robert Menke	8
Indiana's Manufacturing Advantage Morton J. Marcus and Paul A. Wenbert	10

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Saving Interest on Municipal Bonds

DAVID S. KIDWELL

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Indiana has over 2,700 governmental units which are authorized under the state constitution to issue debt to finance public projects.¹ In 1974, these governmental units sold new long-term bond issues totaling more than \$300 million. This was below the record \$390 million sold in 1973, but well above the recent annual average of \$261 million. At the end of 1974, Indiana municipal governments had more than \$2,400 million of long-term debt outstanding. Interest payments on these bonds are estimated to be more than \$90 million annually; this accounts for 3% of the overall expenditure of Indiana state agencies and local governments.

Although many costs are involved when new bond issues are sold, the most important of these is interest expense. Unlike other expenses which are incurred only once in the life of a bond issue, interest expense extends over the life of the issue. Recent evidence suggests that municipal governments can achieve material interest cost savings through improving the procedures used in awarding bond issues sold by competitive bid.

1. The Indiana constitution prohibits any direct debt by the state. However, state projects are funded through various state commissions and authorities, for example, the Indiana Toll Road Authority.

NOTE: The author wishes to thank George G. Kaufman, director of the Center for Capital Market Research at the University of Oregon, for his contributions to this article.

SOURCES OF EXCESS INTEREST COST

One source of excess interest cost may arise because Indiana municipalities are required by state law to use the net interest cost (NIC) method of awarding bond issues sold competitively. Only four other states—California, Delaware, Florida and New Jersey—have similar binding requirements. Evidence suggests that NIC bidding does not always allow municipalities to sell their bonds at the lowest possible meaningful interest rate. NIC bidding gives rise to two potential sources of excess interest cost: first, the issuer may accept the economically, although not legally, “wrong” bid; and second, even if the economically lowest bid is accepted, the issuer may encourage so-called “inefficient” coupons which increase the interest cost of the lowest bid above that achieved under an alternative bidding system.

NIC Bidding

Historically, the use of NIC to award bond issues is an outgrowth of the complex nature of bond issues sold by state and local governments. Municipal governments generally issue serial bonds consisting of a collection of individual bonds that mature at different dates. This is unlike the sale of most other bonds, which all mature on a single maturity date. The serial

bonds are sold as a single package to an underwriting syndicate at a single interest rate (price). The winning underwriter then unbundles the serial package and reoffers the individual bonds to investors. The coupon rates for individual bonds comprising the serial issues are assigned by the underwriter, not by the issuer. For bonds of different maturities, the coupon rates need not be the same, although it is customary to require that all bonds of the same maturity bear identical coupon rates.

Because of the different coupon rates and the serial nature of municipal bond issues, the computation of an interest rate that discounts future cash payments to the price bid by underwriters is complex. This interest rate is called the true interest cost (TIC), and is also known as the Canadian method, the internal rate of return, or bond book basis. TIC is the interest rate used to price almost all bonds, including municipal bonds sold on secondary markets. Unfortunately, before the advent of electronic computers, the calculation of TIC for a serial bond issue was time-consuming and costly. As a result, the NIC method of computing interest cost was designed some fifty years ago (see addendum). Although NIC is simpler and quicker to compute, it has some costly disadvantages to the issuing municipality when bonds are sold by competitive bid.

Time Value of Money

First, unlike TIC, the computation of NIC does not take into consideration the time value of money. The time value of money recognizes that a dollar today is valued more than a dollar tomorrow which, in turn, is valued more than one the next day, and so on. The NIC is merely the average annual dollar coupon interest per bond to the issuer. Future coupon payments are weighted equally, regardless of the time period in which they are paid. The bonds are sold by the issuer to the bidder with the smallest aggregate dollar interest expense, and thereby the lowest NIC. Because NIC does not assign a time value to coupon payments, it may fail to rank bids correctly in terms of the present value of the coupon payments and bonds may be awarded to an underwriter other than the lowest TIC bidder. Thus, NIC may result in the excess cost of a "wrong bid."

Inefficient Coupons

A second and more costly result of NIC bidding is the generation of "inefficient" coupons. In preparing bids, underwriters will arrange the coupon structure of the serial bond issue to produce the lowest NIC consistent with a target spread. NIC bidding encourages underwriters to

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assign the largest coupons on the earliest maturities in the serial issue. This is because a \$2 coupon on the first bond of a serial issue can be sold at a higher price than \$1 coupons on the first two bonds. Because NIC does not consider the time value of money, the early \$2 coupon is at no extra cost to the underwriter. However, in order to win the bid and offset the impact of the high coupons on the early maturities on the NIC rate, underwriters are forced to put compensating low coupons on later maturities. Unfortunately, both the high-early coupons and the low-late coupons create bonds that, when reoffered individually by the underwriter, may be sold at higher or penalty yields than comparable current coupon par bonds.

The reasons for these penalty yields are easy to identify. After unbundling the serial issue, the underwriter must reoffer the low coupon bonds at discounts from their par value. Unlike coupon income on municipal bonds, which is exempt from federal, and possibly state and local government taxes, the spread between the buying and selling price is subject to capital gains tax. Because investors purchase bonds on an after-tax return, they will purchase discount bonds only if their after-tax yield is equivalent to or higher than the yield on comparable tax-free par bonds. As a result, the issuer effectively pays the investors' capital gains tax and thus surrenders part of the tax exemption typically enjoyed by state and local governments. The high coupon bonds are sold at premiums above par value. Investors who purchase premium bonds may be subject to higher transaction costs in reinvesting the coupons, greater risk in reinvesting coupons at favorable interest rates, or the bonds may be less marketable because investors are not familiar with high-priced bonds. However, similar par bonds have no capital gains tax liability, a lower coupon reinvestment risk and a widespread investor acceptance.

Because of the above reasons, NIC bidding often produces bonds with coupon patterns which, on the whole, sell for penalty yields over comparable par bonds. The penalty yields reduce the price at which underwriters can sell individual bonds and cause them to submit a higher interest cost bid than otherwise.

The cost of inefficient coupons has been estimated empirically, and the evidence suggests that, on the whole, inefficient coupons add eleven basis points to the interest cost of a bond issue awarded competitively by NIC. The relative cost of inefficient coupons can be put into better perspective by converting the NIC cost difference into dollar cost differences. For example, at an NIC of 5%, a one basis point change in a \$500,000 serial bond issue with twenty equal \$25,000 principal payments, and an average maturity of ten years, is equivalent to a change of about \$380 in the present value of interest costs over the life of the bond. Thus, an eleven basis point increase in NIC would cost a municipality more than \$4,000 in present value interest payments over the life of the bond issue.

Cost to Governments

Not infrequently, municipalities accept the "wrong" bid and/or receive inefficient coupon patterns. A recent survey of new bond issues sold competitively during the summer of 1973 showed that 12% of the bond issues were sold to the economically "wrong" bidder, and 30% of all issues had at least one maturity with inefficient coupons. Wrong bids were most frequent on medium size issues and, except for revenue issues, the frequency of inefficient coupons increased with issue size. Of the \$13 billion of bonds sold competitively in 1973, the present value dollar cost of wrong bids was estimated to be \$2.5 million and the inefficient coupon payments was \$17.1 million. Thus,

TABLE 1

Comparison of Hypothetical NIC and TIC Bids

<i>Term to Maturity</i>	<i>Par Amount</i>	<u><i>Bid A</i></u>		<u><i>Bid B</i></u>		<u><i>Bid C</i></u>	
		<i>Coupons</i>	<i>Debt Service</i>	<i>Coupons</i>	<i>Debt Service</i>	<i>Coupons</i>	<i>Debt Service</i>
1	\$1,000	5%	\$1,150	30%	\$1,300	0%	\$1,100
2	1,000	5	1,100	0	1,000	0	1,100
3	1,000	5	1,050	0	1,000	10	1,100
<i>Total</i>	<i>\$3,000</i>		<i>\$3,300</i>		<i>\$3,300</i>		<i>\$3,300</i>
NIC		5.00		5.00		5.00	
TIC		5.00		5.17		4.92	

state and local governments could have saved some \$20 million in present value interest payments by prescribing more efficient bidding procedures.²

TIC AND NIC COMPARED

The difference between NIC and TIC can be easily demonstrated with an example. Consider a hypothetical three-year, \$3,000 serial bond issue with three equal \$1,000 maturities which pays interest annually. Assume the three bids shown in Table 1 are received. The bids all have the same total dollar coupon payments (\$300) and bid amount (\$3,000), but differ in the coupon rates and the time pattern of coupon payments. Bid A has equal 5% coupon payments. Bid B is frontloaded and has a 30% coupon on the first bond and a 0% coupon on the other two bonds. Bid C is backloaded with a 10% coupon on the last bond and a 0% coupon on the first two bonds. Note that in Bid C, because interest has to be paid in each year the last bond is outstanding, coupon payments appear in every year, even in years for which the maturing bonds have a 0% coupon rate. Because the total interest payment is identical under each bid, the NIC rate for each bid is the same. However, the TIC rates differ because the timing of the coupon payment is not identical. The backloaded Bid C has the lowest TIC and is

economically the bid the municipality should select, while the frontloaded Bid B is the highest. This would be expected even if we had not known the TICs of each bid. The time value of money concept suggests that for any two bids with equal total payments, the bid having the payments further into the future is the most favorable to the issuer.

Now consider three bids which differ from one another in both total interest payments and in the time pattern of the coupon payments, as shown in Table 2. The bids are constructed so that the TIC rate of each bid is identical. Thus economically the issuer should be indifferent between the bids. However, the NIC rates differ because NIC is sensitive only to the aggregate amount of interest paid and not the time pattern of the interest payments. Notice that the coupon pattern that produces the lowest NIC for a given TIC is the bid with high coupon rates on the early maturities and low coupons on the late maturities (Bid E). Because underwriters can resell shorter-term bonds to investors under TIC at higher prices than longer-term bonds with the same total coupon payment, but are not charged any more for these bonds by issuers under NIC, they attempt to put the largest coupon possible on the earliest bonds. However, to offset the impact of these early high coupons in the NIC calculation, underwriters are forced to put compensating low coupons on the later bonds. Under TIC bidding, the resulting inefficient coupons would

2. Michael H. Hopewell and George C. Kaufman, "Cost to Municipalities of Selling Bonds by NIC," *National Tax Journal* (December 1974), pp. 531-541.

TABLE 2

Comparison of Hypothetical NIC and TIC Bids

<i>Term to Maturity</i>	<i>Par Amount</i>	<i>Bid D</i>		<i>Bid E</i>		<i>Bid F</i>	
		<i>Coupons</i>	<i>Debt Service</i>	<i>Coupons</i>	<i>Debt Service</i>	<i>Coupons</i>	<i>Debt Service</i>
1	\$1,000	5%	\$1,150	29.05%	\$1,290.50	0%	\$1,101.50
2	1,000	5	1,100	0	1,000.00	0	1,101.50
3	1,000	5	1,050	0	1,000.00	10.15	1,101.50
<i>Total</i>	<i>\$3,000</i>		<i>\$3,300</i>		<i>\$3,290.50</i>		<i>\$3,304.50</i>
NIC		5.00		4.48		5.08	
TIC		5.00		5.00		5.00	

tend to increase the TIC bid or reduce the underwriter's spread and work to the bidder's disadvantage.

TIC AWARDS

Awarding bonds on the basis of TIC mitigates many of the inherent problems of NIC bidding. In contrast to NIC, TIC assigns a time value to future coupon payments, and is thus considered a more meaningful measure of interest. The high-low coupon patterns which favor underwriters under NIC bidding and produce inefficient coupons become costly with TIC awards. Under TIC bidding, the cost of inefficient coupons would appear in the TIC and work to the disadvantage of the bidder. In general, the use of TIC solicits bids close to the lowest possible interest cost for the issuer.

TIC is not without disadvantages. It is unfamiliar to many issuers and underwriters, and its computation for a serial bond issue requires the use of an electronic computer. At present, only a small number of municipalities award bonds on the basis of TIC. However, the number is growing rapidly. In 1975, almost \$2 billion—or 10%—of the total bonds sold competitively were awarded by TIC. The failure of municipalities to adopt TIC is attributable to lack of understanding and historical precedent. However, issuers are becoming increasingly aware of the potential higher effective interest

cost arising from NIC bidding, and TIC is gaining acceptance, particularly among larger issuers.

Recent first-time issuers include the Washington State Public Power Supply System, the city of Philadelphia, and the state of Oregon. Smaller issuers include the city of Riverside (California) and Douglas County Public Utility District (Washington). Of those issuers who have converted to TIC, not a single user has gone back to NIC on comparable issues. Evidence from the marketplace suggests that these and other TIC sales have met with success in terms of interest paid and the number of bids received. (The number of bids received is a measure of competition. Empirical evidence suggests that the larger the number of bidders, the lower the new issue borrowing cost.) A recent survey of TIC issuers in 1973 reported that interest paid on the TIC issues was lower and the number of bids received was the same as on comparable NIC issues sold at the same time. Furthermore, underwriters on these issues reported experiencing no difficulty in preparing these bids. At present, virtually all large underwriters have experience in preparing TIC bids.

RECOMMENDATIONS FOR INDIANA

What can Indiana governmental units do to reduce excess interest cost caused by awarding bonds on an NIC basis? First would be to

consider awarding bonds by TIC. TIC would solicit bids closest to the lowest possible interest cost. Unfortunately, in Indiana TIC awards are illegal for bond issues sold competitively (see Indiana Code 19-8-5-3). Because of the advantages of TIC, it is recommended that Indiana lawmakers consider legislation that will allow Indiana municipalities the opportunity to award bonds by TIC. Because some underwriters (particularly small regional firms) are not comfortable with TIC bidding strategy and may be reluctant to bid such issues, and because computers may be less available to both small issuers and small underwriters, TIC is presently not recommended for all issuers. Market evidence to date suggests that municipalities with bond issues of \$10 million or greater will achieve interest rate savings by implementing TIC bidding procedures.

Until the time when TIC awards are possible, most excess interest cost associated with NIC bidding can be eliminated or substantially reduced by specifying appropriate coupon constraints. Under normal market conditions of a level or upward sloping yield curve, some form of nondescending coupon constraint will generate a reasonably low TIC bid regardless of the maturity schedule of the bonds issued. A

nondescending coupon constraint requires the coupon rates on a maturity be equal to or greater than coupon rates on the immediate preceding maturity. Such a constraint eliminates the possibility of costly high-low couponing. Other modifications may be required for bond issues with unique features or other market conditions.³ The shape of the market yield curve is important because an efficient bid has coupons which tend to follow the prevailing yield curve and thereby produces individual bonds with reoffering prices at or near par. Even though a nondescending coupon constraint cannot completely eliminate the creation of inefficient bids, evidence from the marketplace suggests that most potential excess interest costs can be removed. At present for issues of less than \$10 million, NIC with proper coupon constraints may be used. However, the time is rapidly approaching when all issues, large and small, will benefit from TIC bidding.

3. The recommended constraints are discussed at greater length in George G. Kaufman and Michael H. Hopewell, *Bidding Rules to Reduce Interest Costs in the Competitive Sale of Municipal Bonds*. Copies of the manual can be obtained free of charge from the Center for Capital Market Research, College of Business Administration, University of Oregon, Eugene, Oreg. 97403.

Business Archives Project

A one-year pilot project designed to outline and coordinate the establishment of a business archives has been undertaken by the Krannert Library of the Krannert Graduate School of Management, Purdue University. During the course of the year, a collecting policy will be determined, as well as appropriate standards for the administration, arrangement and description, conservation, and reference use of busi-

ness and business-related records and manuscripts.

It is anticipated that in addition to the planning activity, some notable acquisitions will result.

Inquiries may be addressed to: Susan F. Sudduth, Krannert Library, Krannert Graduate School of Management, Purdue University, West Lafayette, Indiana 47909.

ADDENDUM

The equation for TIC, with semiannual coupons and compounding, is:

$$B = \sum_{n=s}^m \left[\sum_{j=1}^{2n} \frac{C_n A_n / 2}{\left[\frac{1 + \text{TIC}}{2} \right]^j} \right] + \sum_{n=s}^m \frac{A_n}{\left[\frac{1 + \text{TIC}}{2} \right]^{2n}}$$

where:

B = aggregate dollar amount bid for bonds

C_n = coupon rate on bond maturing in n periods

A_n = total par value of bond maturing in n periods

n = number of years bond outstanding

s = years to first maturity

m = years to last maturity

j = number of semiannual coupon periods

The equation for NIC is:

$$\text{NIC} = \frac{\sum_{n=s}^m n A_n C_n - P}{\sum_{n=s}^m n A_n}$$

where:

P = premium bid over aggregate par value for all maturities

Ode to the Tulip Poplar

ROBERT MENKE

President, Styline Corporation, Huntingburg, Indiana

One of the most valuable trees growing in the woodlots and forests of Indiana is its state tree—the tulip tree or yellow poplar. Its blooms are described in an ancient handbook as being “erect on every bough holding the sunshine in their cups setting the whole giant tree afire.” The leaves of the tulip poplar, hanging from long, slender stalks, are forever turning and rustling in the slightest breeze, which gives the tree a liveliness that softens its soldier-like grandeur.

The tulip poplar is second in girth only to the sycamore and is taller than all other American broad-leafed trees, occasionally in the past surpassing a diameter of 10 feet and a height of 190 feet. Among the hardwoods, the annual harvest of tulip poplar timber is exceeded only by the oaks and the sweet gum. The total volume of tulip poplar in the United States is estimated to be nearly 5% of all hardwood sawtimber. In an economy of increasing scarcity of quality timber, the tulip poplar's potential for alleviating hardwood shortages is great. Each year yellow poplar sawtimber growth is one-third more than removals.

A variety of climatic conditions supports the yellow poplar's growth, from moderately severe winters in southern New England to almost frost-free winters in central Florida. Like a benign but fierce king, it reigns in a variety of soils and competes successfully with other forms of life in the endless wars of plant succession. Ralph E. Willard, timber staff offi-

cer of the Wayne Hoosier National Forest, Bedford, Indiana, states that in 1975 reforestation efforts on federal forest land in Indiana and Ohio will have established six and one-half times more area of yellow poplar than black walnut, mostly because of natural seeding and regeneration.

The tree is a pioneer on abandoned or clear-cut land, and introduces itself quickly into a nurse crop of pines, dogwood, sassafras or sumac. With scarification after logging and the girdling of some hollow beeches and worm-eaten soft maples, the winged samaras will plant tulip poplar a distance four or five times the height of the seed tree. The yellow poplar is relatively free from disease and, when the bole or stem is an inch in size, it is fairly resistant to damage by fire. When its crown is exposed to a half day or more of sunshine, it grows twice as tall and twice as fast in diameter as shaded saplings.

FROM CANOES TO CABINETS

Yellow poplar is actually not a poplar at all but belongs to the magnolia family. The famous eighteenth century Swedish botanist, Peter Kalm, who traveled extensively in North America, reported that “the leaves of the tulip poplar are good for headaches, and for worms in horses, but they are incomparable for treating gout and other pains of the legs.”

The early settlers built cabins and barns with tulip poplar logs and lined their cisterns with them, since poplar imparts no taste to

water. This same quality makes it suitable for crates used for perishable food. Although it is a hardwood, yellow poplar is softer than any softwood except for western white pine and alpine fir. In the past it was used to build rafts, and the resistance of its heartwood to termites and rot, its excellent painting characteristic, its workability and toughness made it a favorite for cabinet work and building material.

Daniel Boone and other pioneers floated down the Ohio and other rivers in yellow poplar dugouts, and for this reason the tree was called "canoe wood." Today the woodworking industry in Indiana is, in a manner of speaking, "up the creek" and could use many canoe trees and some good-sized canoe paddles. Forty thousand people are employed in the \$2 billion Hoosier woodworking industry. It has been estimated that 85 to 90% of the wood material used in Indiana comes from outside the state, while on its 3.8 million acres of forests and woodlots farmers idle along growing quality timber at less than one-fourth of capacity. In the 1800s Indiana was the greatest hardwood center in the world and only poplar trees 30 inches in diameter with upward of 400 board feet were cut. By 1905 mills were glad to get 14-inch trees which sawed out 100 board feet clear. Today 9- and 10-inch thick yellow poplar is cut along with even scragglier walnut.

EASING THE LUMBER SHORTAGE

Tulip poplar is one of the best of our renewable resources, an efficient quality hardwood solar energy system, a universal photosynthetic power machine available to all the poor, unproductive woodlots of southern Indiana. Given a chance, the tulip poplar can make a primary contribution to the salvation of the state's hardwood industry. How can the state, which ranks fourth in the nation in the production of furniture and first in the manufacture of kitchen cabinets and hardwood veneer, grow more sawlogs and thus ease the shortage of high-grade lumber?

The Indiana Department of Natural Resources can certainly give more attention to timber stand improvement and even-stand management on public and private lands. More funds can be made available to woodland owners through government Agricultural Stabilization Conservation Service programs for frilling (perimeter cut and spray girdling) crooked and hollow trees and making openings for the regeneration of desirable species. The state can simplify entry into its classification program which exempts from most property taxes land dedicated to forestry. The federal government should allow faster depreciation in order to encourage industry to mechanize further for better utilization of lower-grade lumber and recovery of wood waste.

Without expanded technologies for recycling wood waste into all kinds of particle and chip boards, the wood industry would be critically short of lumber today and the public would be forced to buy a great deal more metal and plastic furniture and cabinets for their homes. It is the walnut finish process of using sophisticated double roll printing machines and new methods of staining, glazing, shading and distressing lower-grade wood which has enabled the furniture industry to satisfy the public's insatiable demand for walnut and other fine cabinet woods. An industry based upon traditions of style and the warmth, texture and varied grain patterns of wood needs not only real walnut, but a large volume of tulip poplar as well.

ECOLOGICAL CONSIDERATIONS

Growing the Indiana state tree does not make the small woodlot owner any less immune to the hazards of tree farming: fire, increased property taxes, or the threat of loss of capital gains tax treatment of income at harvest time perhaps fifty or sixty years away. Tulip poplar, like white pine, is susceptible to damage from increased sulphur dioxide pollution emanating

from new power plants along the Ohio River, just as all the hardwoods are victimized regularly by the indiscriminate exercise of the right of eminent domain to secure power line rights-of-way. Legislation to require public hearings before the purchase of rights-of-way was bottled up in committee during this past legislative session. The landowner, of course, is left with the obligation to pay taxes forever on eroded and disfigured under-wire openings which can never grow trees again. Rural water lines, financed by the Farm Home Administration, represent another form of encroachment which slowly depletes the hardwood forests as residential developments are built. The tulip poplar is not an ideal lawn tree for these developments because of its size.

In a world growing in population and shrinking in resources, we should be aware of what trade-offs are available. Foresters who opt too much for a single species, for example, the walnut, must be made aware of what this costs in the loss of fast-growing species like tulip poplar. If investors promote more powerlines, they must realize what the ecological losses are to agriculture, to the beauty of our rural landscape, and to multipurpose forestry values like watershed and recreation. Politicians should understand the economics and environmental impact of helter-skelter population dispersion. If our forests and woodlots are to prosper along with our woodworking industry, then we must recognize the unusual characteristics of the tulip poplar, our Indiana state tree.

Indiana's Manufacturing Advantage

MORTON J. MARCUS AND PAUL A. WENBERT

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Short term economic development campaigns by states or localities are likely to have sustained success if they are conceived in the context of fundamental economic realities. Indiana's growth in employment over the past three decades should be studied as a guide to current development efforts.

Total employment in Indiana grew faster between 1940 and 1970 than did employment in the nation, as shown in Table 1. However, of

the nine major employment sectors, two declined both nationally and statewide. Agricultural employment declined in the nation and the state at about the same rate. Employment in mining declined more rapidly in Indiana than in the nation as a whole. Indiana's growth in wholesale and retail trade and in services employment was only slightly ahead of the nation's growth in those areas. The state lagged the nation in the growth of employment in

TABLE 1

Comparative Employment Growth, Percent Change 1940-1970

	<i>Indiana</i>	<i>United States</i>	<i>Indiana Relative to U. S.</i>
Total Employment	77.9	74.8	104.1
Declining Sectors			
Agriculture, agricultural services, forestry and fish	-66.3	-66.4	99.8
Mining	-85.6	-31.9	268.3
Growing Sectors			
Contract construction	110.1	117.4	93.8
Manufacturing	108.2	86.4	125.2
Transportation, communications and public utilities	46.7	64.3	72.6
Wholesale and retail trade	106.0	103.2	102.7
Finance, insurance and real estate	186.5	158.6	117.6
Services	134.8	131.1	102.8
Government	158.7	244.4	64.9

SOURCE: U. S. Department of Commerce, Bureau of Economic Analysis, *Regional Employment by Industry, 1940-1970* (Washington, D. C.: Government Printing Office, 1975), pp. xiii, xiv, and 65-80.

contract constructions; transportation, communications and public utilities employment; as well as in government employment. How then did Indiana's overall growth exceed the national rate? The answer lies in the strong comparative growth of two major employment groups: manufacturing on the one hand and finance, insurance and real estate on the other. This article is concerned with the role that manufacturing has had in the state's employment growth.

In 1940, 30.4% of Indiana's employed population worked in manufacturing, compared with a national figure of 23.7% in that sector. By 1970 the state's specialization in manufacturing had increased to 35.6% employed in

manufacturing compared with 25.2% nationally. During the thirty years from 1940 to 1970, 27.3% of the *added* employment in the nation had been in manufacturing. In Indiana, 42.2% of the new jobs were in manufacturing. As shown in Table 2, manufacturing has accounted for a decreasing portion of Indiana's employment growth decade by decade. Nonetheless, the contribution of manufacturing to employment in Indiana has consistently exceeded the contributions of that industry to overall national growth. In the 1940s, five of every ten new jobs in Indiana were in manufacturing. In the 1960s, three of each ten new jobs stemmed directly from manufacturing. To the extent that manufacturing employment is

TABLE 2

Manufacturing Employment Change in Indiana and the United States, 1940-1960

	1940s		1950s		1960s	
	<i>Change in Manufac- turing Employ- ment</i>	<i>Manufac- turing as a % in Total Employment</i>	<i>Change in Manufac- turing Employ- ment</i>	<i>Manufac- turing as a % in Total Employment</i>	<i>Change in Manufac- turing Employ- ment</i>	<i>Manufac- turing as a % in Total Employment</i>
United States	4,046,111	33.4	3,419,973	38.4	1,814,144	14.0
Indiana	185,070	50.1	95,188	46.3	98,662	30.6

SOURCE: See Table 1.

“basic” it tends to create additional jobs in other supporting sectors of the state’s economy.

Over the thirty year period, Indiana’s differential rate of growth in manufacturing has added more than 60,000 jobs for its labor force.

COMPONENTS OF EMPLOYMENT GROWTH

The growth in manufacturing jobs derives from three sources. Employment in a specific sector may grow as overall national employment grows. If we assume that manufacturing employment would grow in Indiana at the same rate that total employment grows nationally, we can determine the “national share” component of the state’s manufacturing growth. In Table 3, this national share is shown as having been responsible for nearly 123,000 manufacturing jobs in the 1960s. But manufacturing employment nationally did not advance in the 1960s at a pace equal to that of the total economy. This “industry mix” component reduced the state’s manufacturing gains by 60,000. Hence, had Indiana’s manufacturing employment grown only as fast as manufacturing nationally, there would have been about 63,000 new manufacturing jobs in the state. Instead Indiana added nearly 99,000 manufacturing jobs in the decade. We may say that Indiana’s “competitive position” provided the difference, a gain of nearly 36,000 manufacturing jobs.

TABLE 3

Increase in Manufacturing Jobs in Indiana

	1940s	1950s	1960s
National share	93,379	82,866	122,871
Industry mix	38,561	40,943	-60,045
Competitive position	53,130	-28,621	35,836
Total change	185,070	95,188	98,662

SOURCE: See Table 1.

or 15.9% of the total manufacturing employment growth. National manufacturing growth trends have accounted for only 5.1% of the manufacturing employment growth. The bulk of Indiana’s manufacturing growth (78.9%) has been associated with the expansion of employment in the overall economy.

REGIONAL PATTERNS

Not all areas of the state have had the same reliance on manufacturing for new jobs. During

TABLE 4

Manufacturing Employment Change by Region in Indiana, 1940-1960

Region	1940s		1950s		1960s	
	Change in Manufac- turing Employ- ment	Manufac- turing as a % of Change in Total Employment	Change in Manufac- turing Employ- ment	Manufac- turing as a % of Change in Total Employment	Change in Manufac- turing Employ- ment	Manufac- turing as a % of Change in Total Employment
1	25,912	44.2	22,192	43.6	6,493	15.6
2	25,103	60.4	665	4.3	5,670	22.2
3	18,713	56.2	6,586	38.1	18,857	44.6
4	6,977	41.5	6,303	80.3	4,553	26.4
5	7,318	56.4	5,711	51.9	10,873	76.6
6	17,987	55.8	11,523	58.7	7,634	35.3
7	5,872	36.4	4,264	*	2,102	26.5
8	34,756	46.5	26,963	48.7	9,002	10.2
9	7,035	69.4	13	1.1	2,981	54.6
10	6,233	43.2	1,813	36.8	2,606	17.0
11	5,605	69.0	4,781	74.5	5,591	56.0
12	2,619	87.7	2,008	112.0	2,308	74.2
13	13,632	45.9	-2,753	†	9,277	75.7
14	7,305	42.0	5,073	78.2	10,755	63.3

*Manufacturing employment increased while total employment decreased.

†Manufacturing employment and total employment both decreased.

SOURCE: See Table 1.

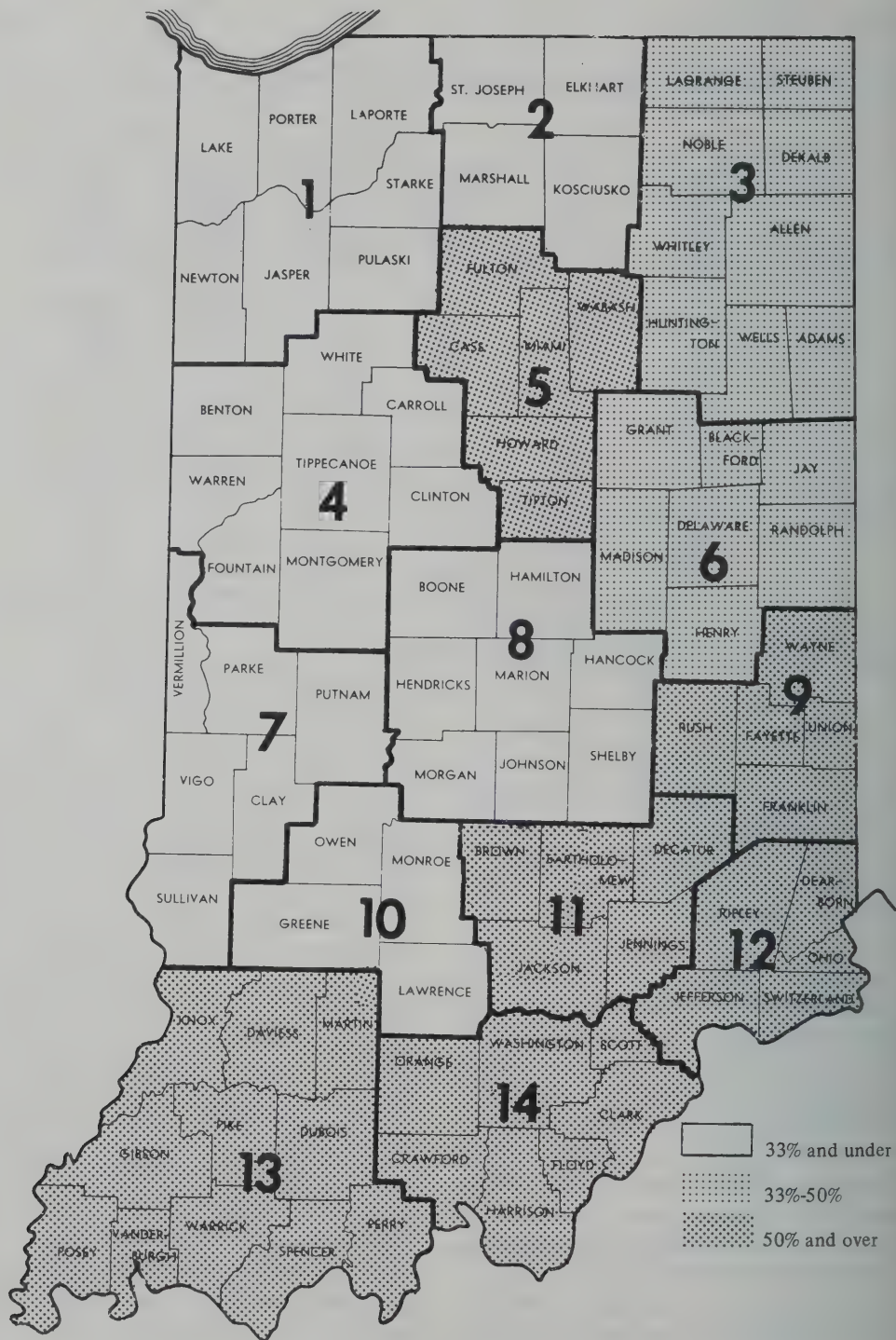
the 1960s, six regions of the state had at least five of every ten *new* jobs created in manufacturing. These areas are shaded the darkest on the accompanying map. They include the Kokomo-Peru-Logansport area (region 5) in which 76.6% of all new jobs were in manufacturing. Least reliant on manufacturing was the Indianapolis metropolitan area (region 8) in which only 10.2% of the growth in employment was in manufacturing. The data for each region and each decade are shown in Table 4. All of eastern Indiana, from the Michigan border to the Ohio River, had at least a third of its employment growth in manufacturing. On the western side of the state, except for region 13 in the south, less than one-third of the employment growth stemmed from manufacturing.

Some aspects of Table 4 should be noted. In the 1950s, the Evansville area (region 13) had a

decline in both total and manufacturing employment. Also during the 1950s, the Terre Haute area (region 7) experienced a decline in total employment, but did have growth in manufacturing employment of nearly 4,300 jobs. For this area the decline in nonmanufacturing activity exceeded the manufacturing advances. In southeastern Indiana (region 12), during the 1950s, manufacturing growth alone accounted for all of the employment growth, more than offsetting a decline in nonmanufacturing activity.

The Columbus area (region 11), adjacent southeastern Indiana (region 12), and the Kokomo-Peru-Logansport area (region 5) found more than half of their new jobs in manufacturing in each decade. At the other end of the spectrum, the Calumet area (region 1), the

Manufacturing Employment as a Percent of Change in Total Employment, 1960s



Indianapolis area (region 8), and the Bloomington area (region 10) did not have a single decade in which half of the new jobs emanated from manufacturing, although each approached that level in at least one decade. Regions 1 and 10 show some trend of a decreasing role of manufacturing in total employment growth. No region evidenced an increasing role for manufacturing over the three decades.

Table 5 shows the competitive position, relative to the state, for every region. Based on

TABLE 5

Manufacturing Employment Added or Lost as a Result of Regional Competitive Positions

Region	1940s	1950s	1960s
1	-12,885	4,528	-12,524
2	3,175	-11,178	-4,855
3	2,764	-2,109	10,176
4	2,434	3,534	1,129
5	-1,022	1,603	6,364
6	-5,474	430	-3,932
7	1,282	1,674	-843
8	2,834	10,040	-10,110
9	278	-3,512	-123
10	3,722	-141	604
11	2,116	2,610	2,932
12	-60	641	790
13	-1,492	-10,267	3,096
14	2,328	2,099	7,344

SOURCE: See Table 1.

These data, regions can be grouped by trends in their competitive position components over the past three decades. Regions 4, 11 and 14 have exhibited a trend of consistently increasing employment in manufacturing more rapidly than the state as a whole. Whether Indiana's manufacturing employment increased or declined relative to national trends in manufacturing, these three regions maintained faster growth in manufacturing employment than did the state. Region 14, for example, has added nearly 11,800 manufacturing jobs since 1940.

Six other regions (3, 5, 7, 8, 10 and 12) have followed a pattern of increasing employment in manufacturing relative to the state in two of the three decades. Regions 5 and 12 increased manufacturing employment relative to the state in the fifties and sixties.

Five regions (1, 2, 6, 9 and 13) increased their employment in manufacturing less rapidly than the state in two of the three decades. Regions 2 and 9 lost manufacturing jobs relative to the state during the fifties and sixties. Region 1 shows a loss of almost 20,900 manufacturing jobs since 1940. None of the fourteen regions decreased their manufacturing employment relative to the state in all three decades.

MANUFACTURING ADVANTAGE

The data presented above reflect the market decisions of firms reacting to economic factors. Among these factors are federal, state and local government policies. Those market decisions, over the past thirty years, suggest that Indiana has a comparative advantage for manufacturing activity. Even during the 1960s, when some were ready to write off manufacturing as a dead-end for economic development and an undesirable basis for local growth, many areas of Indiana depended on manufacturing for half of the new jobs offered their citizens.

This "dependence" has no normative value. The question is, would a more diversified pattern of employment growth yield higher real incomes? Given limited resources for economic development programs, perhaps most communities would do well to consider the record of market behavior and set their goals accordingly. Diversified economic growth, balancing the cyclical sensitivity of blue collar manufacturing with the stability of white collar employment, is appealing. However, our reading of the record is that such growth has not had the support of market conditions in Indiana. Have underlying factors changed sufficiently to make us believe that the coming decades will be markedly different?

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by: Pradeep Bansod, Gladys Huang and Gad Toledano

UNITED STATES-INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA			
		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
EMPLOYMENT								
Nonagricultural employment	May	120.0	119.9	116.2	May	111.2	111.2	108.1
Manufacturing employment	May	97.3	97.5	93.4	May	94.7	95.0	89.8
Average weekly hours (no.)†	May	40.3	39.2	39.0	May	41.0	39.2	39.3
Average weekly earnings (\$)†	May	206.74	198.74	185.25	May	243.95	230.10	213.01
Nonmanufacturing employment	May	129.7	129.4	125.9	May	122.1	122.2	120.2
Unemployment rate (%)	May	7.3	7.5	8.9	May	5.7	6.0	9.9
Unemployment rate—married males (%)	May	4.0	3.9	5.7	—	—	—	—
Continued unemployment claims	—	—	—	—	May	156.3	205.9	508.1
PRODUCTION								
Bituminous coal production	April	121.9	143.2	115.4	May	104.0	126.5	97.2
Industrial electricity production	Jan.	141.5	139.3	134.4	—	—	—	—
Industrial electricity sales	—	—	—	—	April	147.6	149.4	129.1
Manufacturing production	May	122.0	121.1	108.2	April	128.5	132.5	117.7
Raw steel	April	104.3	98.4	96.8	April	124.4	122.4	110.8
CONSTRUCTION								
Construction activity—total	April	178.6	180.1	156.3	April	186.3	178.4	161.7
Residential housing starts	May	110.1	107.5	84.4	April	117.0	150.2	108.7
Residential expenditures	April	206.4	204.1	148.0	April	272.1	244.6	214.2
Nonresidential expenditures	April	165.0	168.4	160.3	April	147.0	147.2	143.8
Public expenditures	Jan.	170.7	169.4	160.2	—	—	—	—
Public works and utilities	—	—	—	—	April	143.7	141.0	118.3
OTHER INDICATORS								
Debits to demand deposits	April	354.0	368.7	316.7	—	—	—	—
Bank debits	—	—	—	—	April	344.2	366.6	333.5
Personal income per capita (\$)	March	6,218.3	6,174.4	5,653.7	1975 IV	5,831.50	5,697.20	5,345.70
Passenger car sales (thousands)†	May	922.0	914.0	741.0	April	24.0	22.3	15.8
Year to date (thousands)	May	4,220.0	3,298.0	3,333.0	April	82.5	58.6	64.7

*Current indicators are preliminary and subject to revision.

†Not seasonally adjusted.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for

the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

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Spendable Average Weekly Earnings by County (third quarter 1975)

(Editor's Note—This series is produced from data provided by the Indiana Employment Security Division. It is derived by deducting federal income taxes and social security taxes from gross average weekly earnings for each county.)

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings	% Change Since Last Quarter
		All	Manu- facturing	All	% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter		
Adams	7,406	158.49	182.24	143.91	1.3	161.91	-0.7	1,065,713	2.1
Allen	111,952	195.84	252.69	171.93	3.3	214.96	1.9	19,248,282	4.2
Bartholomew	24,419	215.47	253.40	186.41	4.1	215.50	3.5	4,551,911	5.6
Benton	1,797	161.80	149.62	146.48	3.0	137.64	-0.2	263,219	12.8
Blackford	3,731	157.59	180.38	143.21	-4.6	160.53	-9.7	534,271	10.1
Boone	5,969	143.66	193.41	133.85	0.6	170.14	-1.3	798,993	3.1
Brown	984	88.70	149.47	83.51	2.6	137.55	3.9	82,147	11.3
Carroll	2,950	139.80	146.85	131.39	4.8	135.88	-2.8	387,568	13.4
Cass	11,068	165.79	197.15	149.59	1.5	172.90	-3.5	1,655,716	3.9
Clark	19,876	167.14	219.19	150.66	4.6	189.15	4.9	2,994,399	4.2
Clay	3,125	147.78	169.33	136.47	5.1	152.34	5.9	426,520	10.2
Clinton	7,350	138.76	152.61	130.64	-3.3	139.55	-11.4	960,266	6.2
Crawford	602	128.99	95.79	121.44	2.9	90.19	4.3	73,109	1.6
Daviess	4,859	132.89	174.18	125.12	6.5	155.96	13.5	607,897	5.0
Dearborn	6,926	192.00	242.43	169.10	3.6	206.93	4.0	1,171,198	5.0
Decatur	5,143	154.25	180.70	140.63	-0.3	160.77	-0.8	723,233	2.6
Dekalb	8,069	163.81	200.50	148.05	-0.5	175.37	-3.6	1,194,595	3.0
Delaware	36,895	191.47	256.60	168.71	0.0	217.93	-2.4	6,224,642	0.5
Dubois	12,460	152.33	161.92	139.37	1.5	146.57	-1.5	1,736,635	7.1
Elkhart	55,991	182.32	208.78	161.96	-1.3	181.47	-3.5	9,068,502	1.9
Fayette	10,668	182.16	207.05	161.85	2.4	180.20	0.9	1,726,633	15.9
Floyd	10,851	153.78	171.18	140.27	4.4	153.75	2.9	1,522,116	5.2
Fountain	3,938	142.32	163.33	133.00	-4.7	147.67	-9.8	523,741	-3.2
Franklin	1,423	124.28	158.11	117.01	2.8	143.61	0.8	166,505	12.8
Fulton	3,964	141.84	163.73	132.69	0.8	147.98	-3.2	525,944	1.8
Gibson	6,273	152.40	187.19	139.42	-3.5	165.56	-12.2	874,560	-1.3
Grant	25,557	188.25	224.83	166.34	0.8	193.31	-1.2	4,251,123	5.0
Greene	3,495	135.22	156.79	127.31	-2.3	142.59	2.2	444,990	-1.1
Hamilton	11,891	166.32	204.71	150.01	2.7	178.47	4.2	1,783,708	6.3
Hancock	5,351	168.73	237.74	151.88	3.3	203.26	1.3	812,742	6.5
Harrison	3,255	133.22	153.88	125.43	1.8	140.35	0.1	408,305	9.7
Hendricks	6,455	162.93	186.30	147.36	5.5	164.90	5.2	951,207	8.7
Henry	10,645	183.04	246.59	162.50	-0.9	210.19	-7.2	1,729,818	5.9
Howard	33,802	220.92	271.97	190.42	2.9	229.88	1.4	6,436,723	9.2
Huntington	9,874	148.66	167.89	137.03	3.7	151.23	2.1	1,353,009	6.9
Jackson	8,082	147.01	158.84	135.98	0.7	144.18	-4.4	1,098,960	7.2
Jasper	4,232	153.09	151.85	139.85	3.5	139.06	-6.5	591,826	7.2
Jay	6,135	156.10	178.64	142.06	-3.5	159.25	-6.3	871,498	-1.6
Jefferson	7,719	142.58	153.18	133.16	0.4	139.90	-4.3	1,027,923	2.1
Jennings	3,673	156.61	169.19	142.45	9.1	152.23	3.1	523,283	18.8
Johnson	11,981	148.25	198.32	136.77	2.5	173.76	-2.8	1,638,700	5.5
Knox	8,815	147.17	194.83	136.08	1.5	171.19	-3.7	1,199,532	4.6
Kosciusko	16,163	163.19	199.55	147.56	2.8	174.67	2.7	2,385,110	6.4
Lagrange	4,338	157.34	187.62	143.02	0.8	165.87	-2.6	620,364	10.5
Lake	171,477	228.46	284.77	195.99	2.2	240.54	2.6	33,607,941	2.0
Laporte	32,365	171.38	195.41	153.90	0.1	171.62	-3.2	4,980,924	0.7
Lawrence	8,072	187.13	231.16	165.51	6.0	198.11	4.3	1,335,949	13.7

Table 1. Stable Average Weekly Earnings by County, *Continued*

County	Employment	Average Weekly		Quarterly Data				April 1975	
		Earnings		(\$ billions)		Percentage Change at Annual Rates			
		All	Manu- facturing	1975 1 Qtr.	1976 1 Qtr.	1975 4 Qtr.	1975 1 Qtr.		
Adison	43,066	222.29	289.35	191	1,433.6	12.6	12.1	-2.1	
Arion	323,101	201.86	255.73	176	1,158.6	8.7	5.0	-9.2	255.7
Arshall	9,565	155.01	182.73	141	1,348.5	3.7	4.0	4.0	344.2
Artin	1,735	140.36	160.39	131	321.2	5.2	13.4	8.9	96.6
Armi	6,334	136.32	152.28	128	926.4	11.9	10.0	8.2	
Arroe	28,330	164.92	166.12	148	168.7	63.3	23.4	-58.6	196.2
Arntgomery	9,338	190.09	244.45	167	97.1	35.3	9.3	-62.3	162.4
Arrgan	5,146	133.12	161.82	125	270.0	3.1	2.3	4.0	257.3
Arwton	2,177	129.88	140.37	122	-53.7	-	-	-	284.0
Arble	7,477	153.20	179.97	139					149.5
Arlio	329	99.89	90.45	94					
Monthly Data									
					Annual Rates	Percentage Change at Annual Rates			
					One Year Ago	Latest Month	Previous Month	One Year Ago	
Arange	3,942	125.88	128.78	111	159.5	May	7.4	5.1	6.2
Arven	953	117.87	164.85	116	172.5	May	12.0	7.0	11.0
Arke	1,735	129.46	138.45	121	173.0	May	3.4	10.5	8.0
Arry	4,269	145.69	163.86	135	287.6	May	6.1	16.0	12.0
Arre	3,001	264.20	142.73	221	633.7	May	9.2	16.0	14.3
Arter	25,676	228.68	301.84	190	194.0	April	-29.5	-85.7	-26.3
Arvey	5,331	198.68	254.66	174	254.7	April	18.7	18.7	11.4
Araski	1,890	150.54	168.09	138	50.1	-	-	-	-
Arnam	5,220	164.85	223.24	144	8.9	-	-	-	-
Arndolph	7,350	177.67	204.72	158	7.4	-	-	-	-
Arley	5,512	157.73	187.01	141					
Arsh	3,134	148.36	194.59	139					
ArJoseph	77,957	188.84	247.74	160					
Artt	3,568	158.78	176.87	144					
Arlby	8,317	145.23	163.40	134					
Arncer	2,377	132.67	161.61	121					
Arke	2,732	129.18	165.46	121					
Arben	5,128	137.91	183.22	121					
Arlian	2,976	158.12	116.90	141					
Aritzerland	859	114.23	115.14	101					
L PRODUCTION									
Period: 1967 = 100									
Arpecanoe	38,140	182.12	231.77	161					
Arton	2,612	155.17	180.52	141					
Arion	605	140.26	183.60	131					
Arnderburgh	65,775	177.30	213.71	151					
Armillion	2,766	188.57	232.90	161					
Ar'o	3								
Arbush	10,531	155.21	178.31	141					
Arren	1,129	181.96	0.00	161					
Arick	8,025	257.24	331.83	211					
Arhington	3,697	122.98	123.88	111					
Arayne	24,528	170.64	214.38	151					
Arlls	5,851	160.17	199.79	141					
Arite	5,557	133.78	144.98	121					
Aritley	5,221	155.80	179.30	141					
ArClassified	41,885	225.53	275.32	191					
INDIANA									
						May 1976	April 1976	May 1975	
Manufacturing						95.4	91.5	86.7	190.7
Food						83.0	84.0	87.2	354.0
Apparel and textiles						87.7	90.6	82.3	117.1
Lumber and wood						90.9	97.7	81.8	
Furniture						104.2	96.6	92.3	485.5
Paper						89.2	85.2	81.4	107.1
Printing						96.0	93.4	92.0	
Chemicals						106.8	104.5	102.4	253.4
Petroleum and coal						72.9	72.1	69.7	552.5
Rubber						95.8	106.0	90.5	166.2
Stone, clay, and glass						92.7	88.9	87.8	
Primary metals						97.6	95.8	87.3	
Fabricated metals						104.9	102.3	98.1	
Nonelectrical machinery						96.7	95.2	98.7	
Electrical machinery						97.3	87.4	80.8	
Transport equipment						101.0	92.4	83.8	

Spending Average Weekly Earnings by County, *Continued*

County	Employment	Average Weekly		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings	% Change Since Last Quarter
		Earnings		% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter			
		All	Manu- facturing						
Madison	43,066	222.29	289.35	191.43	7.0	244.35	9.6	8,244,315	9.5
Marion	323,101	201.86	255.73	176.37	2.5	217.26	1.7	56,985,769	3.4
Marshall	9,565	155.01	182.73	141.22	-0.2	162.27	-1.1	1,350,818	4.2
Martin	1,735	140.36	160.39	131.75	1.2	145.37	-2.7	228,626	9.3
Miami	6,334	136.32	152.28	128.35	5.3	139.34	3.7	812,982	13.6
Monroe	28,330	164.92	166.12	148.91	1.7	149.85	-8.1	4,218,761	5.9
Montgomery	9,338	190.09	244.45	167.69	4.2	208.51	4.4	1,565,921	6.6
Morgan	5,146	133.12	161.82	125.33	1.3	146.49	3.3	644,919	4.4
Newton	2,177	129.88	140.37	122.28	5.0	131.75	0.2	266,249	15.3
Noble	7,477	153.20	179.97	139.91	5.6	160.23	6.7	1,046,182	7.2
Ohio	329	99.89	90.45	94.05	-0.2	85.16	-27.0	30,910	10.5
Orange	3,942	125.88	128.78	118.52	2.3	121.25	0.9	467,230	5.8
Owen	953	117.87	164.85	110.97	1.8	148.86	0.1	105,796	0.2
Parke	1,735	129.46	138.45	121.89	7.8	130.35	11.5	211,433	11.3
Perry	4,269	145.69	163.86	135.14	6.1	148.09	8.8	576,965	1.5
Pike	3,001	264.20	142.73	223.81	-1.5	133.26	0.1	671,729	10.2
Porter	25,676	228.68	301.84	196.16	3.0	254.75	2.0	5,036,696	3.8
Posey	5,331	198.68	254.66	174.03	-0.4	216.45	-0.8	927,737	2.2
Pulaski	1,890	150.54	168.09	138.23	3.1	151.39	-4.3	261,252	9.1
Putnam	5,220	164.85	223.24	148.86	3.8	192.13	3.3	777,001	5.9
Randolph	7,350	177.67	204.72	158.54	4.9	178.48	5.1	1,165,187	3.3
Ripley	5,512	157.73	187.01	143.32	-8.3	165.42	-13.3	789,925	-6.0
Rush	3,134	148.36	194.59	136.84	-2.7	171.01	-7.2	428,860	3.0
St. Joseph	77,957	188.84	247.74	166.77	4.8	211.09	5.2	13,000,968	4.8
Scott	3,568	158.78	176.87	144.13	8.5	157.95	0.6	514,299	28.6
Shelby	8,317	145.23	163.40	134.85	1.0	147.73	-3.3	1,121,583	5.9
Spencer	2,377	132.67	161.61	124.91	4.0	146.33	4.5	296,950	14.0
Starke	2,732	129.18	165.46	121.62	-3.6	149.34	-9.3	332,274	-2.3
Stueben	5,128	137.91	183.22	129.84	0.8	162.63	-0.8	665,788	6.2
Sullivan	2,976	158.12	116.90	143.62	-7.1	110.06	-13.5	427,460	-4.5
Switzerland	859	114.23	115.14	107.55	6.1	108.40	10.9	92,383	5.9
Tippecanoe	38,140	182.12	231.77	161.82	2.7	198.58	-3.3	6,171,703	1.8
Tipton	2,612	155.17	180.52	141.34	0.5	160.64	-6.0	369,237	14.3
Union	605	140.26	183.60	131.68	-1.9	162.91	-5.6	79,669	-9.3
Vanderburgh	65,775	177.30	213.71	158.26	5.9	185.11	5.8	10,409,768	7.7
Vermillion	2,766	188.57	232.90	166.57	-2.2	199.47	-3.5	460,740	-2.5
Vigo	38,036	174.65	203.95	156.31	3.8	177.91	4.9	5,945,386	3.7
Wabash	10,531	155.21	178.31	141.37	2.8	159.01	1.2	1,488,768	4.6
Warren	1,129	181.96	0.00	161.70	11.6	0.00	0.0	182,504	16.7
Warrick	8,025	257.24	331.83	218.42	-0.3	278.77	3.7	1,752,901	2.7
Washington	3,697	122.98	123.88	115.79	-0.9	116.63	-3.8	428,060	5.6
Wayne	24,528	170.64	214.38	153.34	-0.4	185.60	-4.7	3,761,225	-1.0
Wells	5,851	160.17	199.79	145.20	-1.9	174.85	-5.9	849,534	2.8
White	5,557	133.78	144.98	125.95	0.2	134.69	-2.4	699,968	7.8
Whitley	5,221	155.80	179.30	141.83	-1.8	159.74	-2.7	740,540	-1.1
Not Classified	41,885	225.53	275.32	193.82	4.0	232.67	3.4	8,118,352	3.8

UNITED STATES BUSINESS INDICATORS

	Quarterly Data							
	Seasonally Adjusted Annual Rates (\$ billions)			Percentage Change at Annual Rates				
	1976 1 Qtr.	1975 4 Qtr.	1975 1 Qtr.	1976 1 Qtr.	1975 4 Qtr.	1975 1 Qtr.		
Gross national product (GNP)	1,620.4	1,572.9	1,433.6	12.6	12.1	-2.1		
GNP (\$ 1972)	1,241.8	1,216.2	1,158.6	8.7	5.0	-9.2		
GNP potential level (\$ 1972)	1,401.6	1,388.8	1,348.5	3.7	4.0	4.0		
Government purchases	349.2	344.8	321.2	5.2	13.4	8.9		
Personal consumption expenditures	1,029.6	1,001.0	926.4	11.9	10.0	8.2		
Private domestic investment	232.2	205.4	168.7	63.3	23.4	-58.6		
Corporate profits before tax	142.8	132.4	97.1	35.3	9.3	-62.3		
Business inventories	267.9	265.9	270.0	3.1	2.3	4.0		
Federal surplus—deficit (NIA)	-68.6	-72.1	-53.7	—	—	—		
Monthly Data								
	Current Levels or Annual Rates			Percentage Change at Annual Rates				
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago		
Consumer price index†	May	169.3	168.3	159.5	May	7.4	5.1	6.2
Consumer price index—food†	May	180.6	178.9	172.5	May	12.0	7.0	11.0
Wholesale price index†	May	181.4	180.9	173.0	May	3.4	10.5	8.0
Money supply (\$ billions)	May	303.2	301.7	287.6	May	6.1	16.0	12.0
Money supply plus time deposits	May	697.0	691.9	633.7	May	9.2	16.0	14.3
Mobile home shipments (thousands)	April	237.0	244.0	194.0	April	-29.5	-85.7	-26.3
Mortgages—outstanding (\$ billions)#	April	290.7	286.6	254.7	April	18.7	18.7	11.4
Mortgages—new issues (\$ billions)#	April	78.5	69.8	50.1	—	—	—	—
Mortgage rate—new homes	May	9.0	8.9	8.9	—	—	—	—
Prime rate business loans	May	6.8	6.8	7.4	—	—	—	—

†Base period, 1967 = 100

‡ All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	May	April	May	INDIANA	May	April	May
	1976	1976	1975		1976	1976	1975
Manufacturing	95.7	93.5	88.5	Manufacturing	95.4	91.5	86.7
Food	93.9	93.6	91.2	Food	83.0	84.0	87.2
Apparel and textiles	98.0	94.2	83.3	Apparel and textiles	87.7	90.6	82.3
Lumber and wood	101.0	100.2	88.2	Lumber and wood	90.9	97.7	81.8
Furniture	104.9	103.5	89.8	Furniture	104.2	96.6	92.3
Paper	100.8	98.1	89.3	Paper	89.2	85.2	81.4
Printing	100.5	99.5	98.8	Printing	96.0	93.4	92.0
Chemicals	102.1	103.5	98.4	Chemicals	106.8	104.5	102.4
Petroleum and coal	110.3	110.7	104.5	Petroleum and coal	72.9	72.1	69.7
Rubber	110.5	118.8	107.2	Rubber	95.8	106.0	90.5
Stone, clay, and glass	99.7	98.1	94.2	Stone, clay, and glass	92.7	88.9	87.8
Primary metals	88.6	87.1	83.6	Primary metals	97.6	95.8	87.3
Fabricated metals	101.0	97.7	92.9	Fabricated metals	104.9	102.3	98.1
Nonelectrical machinery	102.0	98.9	100.2	Nonelectrical machinery	96.7	95.2	98.7
Electrical machinery	94.9	91.2	86.8	Electrical machinery	97.3	87.4	80.8
Transport equipment	91.9	87.2	81.5	Transport equipment	101.0	92.4	83.8

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	<i>April 1976</i>	<i>March 1976</i>	<i>April 1975</i>	REPORTING CITIES	<i>April 1976</i>	<i>March 1976</i>	<i>April 1975</i>
ANDERSON				FORT WAYNE			
BD*	198.9	199.5	158.3	BD	315.2	325.1	255.7
CUC†	116.5	122.0	693.6	CUC	252.6	309.1	844.2
IES‡	148.9	161.9	137.1	IES	114.5	115.8	96.6
BEDFORD				FRANKFORT			
CUC	108.6	92.0	324.5	CUC	333.8	294.8	1,096.2
IES	153.8	163.4	114.9	IES	160.4	176.6	162.4
BLOOMINGTON				GARY			
BD	404.5	361.0	288.2	BD	272.8	293.3	257.3
CUC	181.5	197.2	619.7	CUC	111.3	128.0	284.0
IES	92.9	100.8	119.8	IES	171.0	164.6	149.5
COLUMBUS				GOSHEN			
BD	326.5	348.2	260.1	BD	289.1	293.1	195.2
CUC	88.6	106.2	391.1	IES	191.7	159.4	144.6
IES	164.9	169.5	147.2	HAMMOND §			
CONNERSVILLE				IES	151.8	163.3	143.5
BD	202.8	241.8	200.9	HUNTINGTON			
CUC	94.8	118.3	593.5	CUC	298.8	372.8	1,362.2
IES	143.6	146.1	101.3	IES	126.3	121.0	124.4
CRAWFORDSVILLE				INDIANAPOLIS			
BD	277.6	308.0	256.4	BD	461.0	478.0	494.3
CUC	838.6	699.4	1,077.3	CUC	72.1	77.9	566.3
IES	176.1	161.3	147.0	IES	141.2	142.5	137.0
EAST CHICAGO				JEFFERSONVILLE			
BD	192.2	195.3	365.4	BD	358.1	325.6	284.4
CUC §	204.5	187.5	292.6	IES	138.2	126.9	124.0
IES	84.1	84.4	100.3	KOKOMO			
ELKHART				CUC	110.7	94.0	810.5
BD	289.0	298.7	208.3	IES	190.3	200.2	138.2
CUC	160.3	152.5	870.9	LAFAYETTE			
IES	161.4	172.2	158.7	BD	229.3	257.9	217.0
EVANSVILLE				CUC	298.3	335.8	852.9
BD	223.9	233.2	195.8	IES	153.7	156.7	145.2
CUC	96.2	109.1	395.7	LA PORTE			
IES	135.2	133.0	108.4	CUC	301.6	274.2	572.1
				IES	188.1	177.4	181.9
				LOGANSPORT			
				BD	355.8	349.8	326.5
				CUC	74.6	83.6	411.3
				IES	260.8	239.1	167.9
				MADISON			
				BD	266.0	262.9	190.7
				CUC	167.9	207.7	354.0
				IES	141.8	122.2	117.1
				MARION			
				CUC	126.3	146.2	485.5
				IES	120.7	131.7	107.1
				MICHIGAN CITY			
				BD	239.1	297.1	253.4
				CUC	256.4	241.2	552.5
				IES	184.8	184.9	166.2

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales
§Continued Unemployment Claims of
East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	<i>April 1976</i>	<i>March 1976</i>	<i>April 1975</i>	REPORTING CITIES	<i>April 1976</i>	<i>March 1976</i>
MISHAWAKA				SOUTH BEND		
BD *	151.4	161.2	242.4	BD	247.6	268.5
IES †	137.1	139.1	128.9	CUC	176.8	177.2
MUNCIE				IES	108.0	123.9
BD	286.5	314.0	227.4	TERRE HAUTE		
CUC ‡	117.1	125.2	380.7	BD	248.0	255.2
IES	110.2	125.0	97.1	CUC	219.3	213.3
NEW ALBANY				IES	163.0	166.2
BD	445.0	476.1	411.1	VALPARAISO		
CUC	524.8	628.0	752.7	CUC	212.3	216.0
IES	99.7	99.5	98.4	IES	177.9	177.3
NEW CASTLE				VINCENNES		
BD	266.5	264.9	239.6	BD	267.9	274.8
CUC	114.5	105.4	593.5	CUC	135.9	162.6
IES	154.4	168.3	126.3	IES	138.2	135.4
PERU				WABASH		
BD	308.3	313.2	249.6	BD	273.6	226.1
CUC	75.2	91.7	308.8	CUC	98.4	143.2
IES	194.3	218.4	168.0	IES	181.7	168.6
RICHMOND						
BD	219.5	200.3	178.5			
CUC	215.9	272.6	520.5			
IES §	121.7	123.7	110.8			
SEYMOUR						
BD	372.9	348.1	316.6			
CUC	65.0	95.2	236.0			
IES	110.5	110.2	87.9			

*Bank Debits
†Industrial Electricity Sales
‡Continued Unemployment Claims
§Richmond IES converted to a
kilowatt-hour base from a dollar base

INDIANA IN PERSPECTIVE

Data on the Voting-Age Population: 1972 and 1976

	<i>1972 Total (000)</i>	<i>1976 Total (000)</i>	<i>Percent Change 1972-76</i>	<i>Persons Voting-1972 Number (000)</i>	<i>Percent of Total</i>
U. S.	140,068	150,041	7.1	77,625	55.4
Indiana	3,496	3,640	4.1	2,126	60.8
Ohio	7,123	7,459	4.7	4,095	57.5
Illinois	7,532	7,718	2.5	4,721	62.7
Michigan	5,868	6,268	6.8	3,490	59.5
Kentucky	2,204	2,374	7.7	1,067	48.4

SOURCE: U. S. Department of Commerce, Bureau of the Census, *Population Estimates and Projections*, Series P-25, No. 626.

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INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	<i>April</i> 1976	<i>March</i> 1976	<i>April</i> 1975
MISHAWAKA			
BD *	151.4	161.2	242.4
IES †	137.1	139.1	128.9
MUNCIE			
BD	286.5	314.0	227.4
CUC ‡	117.1	125.2	380.7
IES	110.2	125.0	97.1
NEW ALBANY			
BD	445.0	476.1	411.1
CUC	524.8	628.0	752.7
IES	99.7	99.5	98.4
NEW CASTLE			
BD	266.5	264.9	239.6
CUC	114.5	105.4	593.5
IES	154.4	168.3	126.3
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IES	110.5	110.2	87.9

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IES	108.0	123.9
TERRE HAUTE		
BD	248.0	255.2
CUC	219.3	213.3
IES	163.0	166.2
VALPARAISO		
CUC	212.3	216.0
IES	177.9	177.3
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BD	267.9	274.8
CUC	135.9	162.6
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WABASH		
BD	273.6	226.1
CUC	98.4	143.2
IES	181.7	168.6

*Bank Debits

†Industrial Electricity Sales

‡Continued Unemployment Claims

§Richmond IES converted to a
kilowatt-hour base from a dollar base

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The Indiana Tax Package After Three Years
Donald W. Kiefer

1

Income Flows Within Indiana
Morton J. Marcus

9

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The Indiana Tax Package After Three Years

DONALD W. KIEFER

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Library of Congress, Washington, D. C.*

In 1973 the Indiana general assembly, at the governor's behest, passed four bills which were known collectively as the 1973 tax package. The primary purpose of those bills was the attainment of "substantial, visible, and lasting property tax relief." This article examines the property tax relief which has been achieved by the tax package and three emerging fiscal problems which have resulted from its adoption.¹

PROPERTY TAX RELIEF

The 1973 tax package has been successful in achieving its primary goal of providing substantial property tax relief. The degree of property tax relief, and replacement by other taxes, is indicated by the change in the state's overall fiscal balance. In 1973 total state-local tax revenue in Indiana slightly exceeded \$2.6 billion, of which over 46% (\$1.2 billion) was derived from the property tax. By 1976 total

state-local tax revenue had increased to \$2.98 billion, but the property tax was the source of only 34.6% (\$1.03 billion) of the total.

Figure 1 illustrates the degree of property tax relief as indicated by statewide average property tax rates. The average property tax rate in 1973 was \$10.064 per \$100 of assessed valuation. This represented an increase of 53% from the statewide average rate of \$6.59 in 1963, and a 20% increase from the \$8.41 rate in 1968. These average tax rates correspond to total state property tax levies of \$559.1 million in 1963, \$831.5 million in 1968 and \$1,203.9 million in 1973. Thus, the total state property tax levy increased approximately 8.2% per year from 1963 to 1968, and about 7.7% per year from 1968 to 1973, or about 8.0% annually for the decade.

Had this rise in total state property tax levy continued until 1976, the statewide average rate this year would be approximately \$11 per \$100 assessed valuation.² However, the actual 1976 statewide average property tax rate, after application of the state 20% property tax replacement credit (PTRC) and property tax

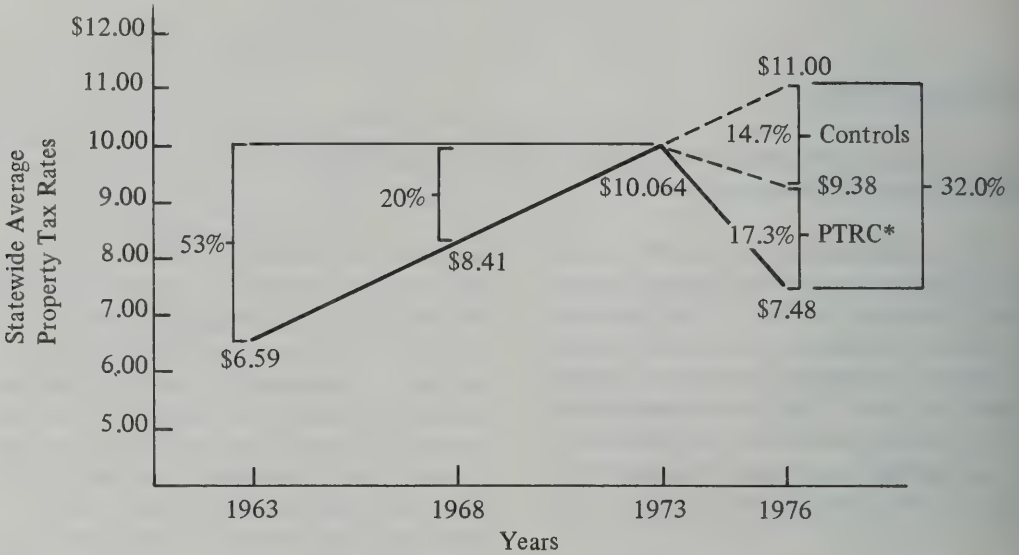
1. For a complete summary and preliminary analysis of the tax package, see Donald W. Kiefer, "Special Tax Issue," *Indiana Business Review* (October 1974). The selection of problems to be examined in the present article is not intended to imply a decrease in relevance or validity of issues discussed in the earlier article.

NOTE: In 1973, when the Indiana tax package was adopted, the author was director of the Indiana Commission on State Tax and Financing Policy. The conclusions expressed in this paper are those of the author and do not represent the position of the Congressional Research Service or the Indiana Commission on State Tax and Financing Policy.

2. If the approximately 8% annual increase in state property tax levies experienced during the decade 1963-1973 had continued, the total state property tax levy in 1976 would be \$1,516.6 million. This levy divided by the actual 1976 total state assessed valuation of \$13.797 billion yields an estimated statewide average property tax rate of \$10.99, which is rounded to \$11 for exposition. The average tax rate, rather than the tax levy, is used in the text because it is more easily understood by most readers.

FIGURE 1

Property Tax Relief Achieved by 1973 Tax Package
as Indicated by Statewide Average Property Tax Rates



*Property Tax Replacement Credits

credits from the local option income tax, is \$7.48. This represents a 32% reduction in property tax rates from the projected level based on pre-1973 trends, well within the original goal of the tax package proponents in 1973.

This tax reduction can be divided into two components, one portion attributable to the

property tax controls, and the second portion resulting from the state and local property tax replacement credits. The statewide average property tax rate in 1976 *before* application of the 20% state credit and the local option property tax credits was \$9.38 per \$100 assessed valuation. The \$1.62 rate reduction, from \$11.00 to \$9.38, is attributable in large measure to the

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property tax controls. The rate reduction results from an increased assessed valuation coupled with a tax levy freeze (except in civil governments in nonlocal option counties where the tax rate is frozen).³ The remainder of the tax rate reduction, from \$9.38 to \$7.48, results from the application of the state 20% property tax replacement credit and the local option property tax replacement credits. It is interesting, and perhaps problematical, that nearly half of the total property tax rate reduction, 14.7 points of the 32 percentage point decrease, is a result of the property tax controls. The remaining 17.3 points of the 32 percentage point decrease are attributable to the property tax credits.

Another way of examining the property tax relief attained since 1973 is to consider the average tax rate reduction achieved by counties in different circumstances. The accompanying table shows such averages for counties with

Average Effective Property Tax Rate Reduction from 1973 to 1976 (After application of all property tax replacement credits)

<i>Number of Counties and Amount of Local Option Tax</i>	<i>Percentage Reduction</i>
17 counties with 1%	33.68
1 county with .75%	30.74
20 counties with .5%	31.23
54 counties without local option tax	23.77

different local option tax rates and for counties without the local option tax. The averages in this table are not comparable to the 32% reduction shown in Figure 1; rather they are comparable to the 25.7% reduction from the \$10.064 statewide average property tax rate in 1973 to the \$7.48 statewide average rate in

3. A small portion of this tax rate reduction is due to property tax levies reduced below the maximum limits because of the availability of local option revenue and/or increased state aid.

1976. (A projection of the average tax rates in each of the ninety-two counties would be subject to considerable error, not to mention tedium.) The figures in the table clearly reveal the impact of the local option tax on property tax relief. Based on a comparison of actual 1973 and 1976 effective tax rates, after credits, property tax relief averages 33.7% in counties with a 1% local option income tax, and averages 23.8% in counties without the local option tax.

STATE REVENUE IMPLICATIONS

During the course of deliberations on the tax package by the 1973 legislature, the staff of the Commission on State Tax and Financing Policy issued a series of projected cash flow charts for the prospective legislation, updating the projections each time the tax package was amended. Consequently, a large number of cash flow projections were issued, at times causing some confusion. However, all the various cash flow charts expressed at least one consistent theme: After the first few years, the tax package would be underfunded. Each version of the tax package, including the one finally adopted, would begin to deplete the state general fund within, at most, four years after enactment. The projected cash flow for the adopted version of the tax package estimated that the legislation would diminish the projected state general fund by approximately \$40 million in fiscal 1975-76, \$127 million in 1976-77, and would cause an increasing outflow each year thereafter. This is *not* to say that the general fund will actually decline by this amount or show a deficit of this magnitude; rather, the *changes* implemented by the tax package will reduce general fund revenues by this amount from revenue levels anticipated if no tax changes had occurred.

Two principal elements of the tax package are responsible for this effect on the general fund. The first is the state commitment to finance all future increases in expenditures for primary and secondary education from state

funds, a commitment necessitated by the freeze on local school property tax levies. In 1973 the aggregate expenditure of local school corporations in the state approached \$1 billion, an amount which exceeded total state general fund outlays. Thus, the aggregate annual spending increase of the schools normally would be expected to equal or exceed increases in the state general fund.

Because of provisions in the budget bills adopted since 1973, this burden to finance increased school costs has been shared equally by the Property Tax Replacement Fund (PTRF) and the state general fund. The cost to each of these funds in 1973-74 was \$14.2 million. During the current fiscal year (1976-77) the cost is \$126.5 million to each fund. This rapid increase in costs to the state will continue indefinitely if the present school finance system is maintained.

The second principal element of the tax package which causes a reduction in the potential revenues of the general fund (compared to the pre-1973 revenue system) is the phase-out of the corporate gross income tax. This phase-out, which by now has reduced corporate gross income tax rates by 20% (to a rate of 1.6% on most financial and service income and a rate of 0.4% on income from retail sales, wholesale sales, laundering and industrial processing), will reduce potential general fund revenue by at least \$60 million during the present fiscal year. This reduction will grow by more than \$15 million annually for the next sixteen years as the base of the tax expands and the rate reduction continues.

A new supplemental net income tax was adopted in 1973 at rates which will increase to 3% on January 1, 1977. This new tax presently generates sufficient revenue to offset the decline in funds caused by the gross income tax reduction and, with the rate increase scheduled next year, will continue to offset the gross income tax reduction until about 1980. Beyond that time, the gross income tax phase-out will

constitute an increasing net drain on the state general fund unless halted or offset by further tax increases.

It should be remembered that the supplemental net income tax was originally proposed as a way of obliging all corporations to pay at least some increase in taxes to support the state property tax relief system. None of the revenue from the supplemental net income tax goes into the PTRF, but if the supplemental net tax does serve this purpose related to property tax relief, then the entire \$60 million cost of the gross tax phase-out already represents a net drain on the potential general fund. However, if the supplemental net tax is intended to replace the revenue from the gross tax phase-out, which would seem to follow from its use for the general fund, then the corporate sector contributes relatively little to the state property tax relief program.

Two additional large expenditure items, which could not have been fully anticipated in 1973, have increased the strain on the general fund during the current biennium. A state revenue sharing program is distributing \$25 million to cities, towns and counties to help them cope with growing expenditure requirements within the framework of the property tax controls. Additionally, because of growing highway costs and insufficient gasoline tax collections, \$63.5 million has been transferred from the general fund to the highway program.

The net result of these factors, combined with other ongoing budgetary programs, will be a reduction in the general fund surplus—the operating balance of the state—to approximately \$35 to \$40 million by the end of the fiscal year next June. (The surplus was \$123.2 million in June 1976.) This surplus is a lot of money, of course, but it represents only about 2.6% of the state's budget, and would be wiped out early in 1978 if present budgetary trends continue. This general fund balance is backed up by \$100 million in the tuition reserve, which is set aside within the general fund to facilitate

the state's cash flow at the time of school distributions. Additionally, the PTRF is expected to end fiscal 1977 with a reserve of nearly \$230 million.

Because of the relatively low and declining general fund balance, the next session of the legislature will be faced with difficult fiscal choices. Some juggling of the books may be possible by shifting balances between the PTRF, the tuition reserve and the general fund, or alternatively, by shifting funding responsibilities such as increasing the proportion of school costs paid out of the PTRF. But these measures would be temporary, delaying the difficult decisions one, or at most, two years. When the difficult choices are faced, none of the alternatives will be very pleasant to the decision makers or their constituents. Among the alternative policy choices will be to:

- (1) reduce the amount of the state property tax replacement credit and use part of the revenue for other programs

- (2) reduce the amount of state funding for schools and loosen the property tax controls on local school corporations

- (3) reduce the amount of state aid to and revenue sharing with local civil governments and loosen the property tax controls on these governments

- (4) cease or postpone the phase-out of the corporate gross income tax

- (5) raise additional revenue through, for example, eliminating the sales tax exemption on food or instituting a local option sales tax

- (6) reduce or eliminate some government programs.

The first five alternatives involve higher taxes—either property taxes, corporate income taxes or other taxes. At least one tax, the excise tax on gasoline, appears to be a likely candidate for increase to fund rising highway expenditures. In general, however, the choices will not be easy nor will the decisions be avoidable.

LOCAL GOVERNMENT FUNDING

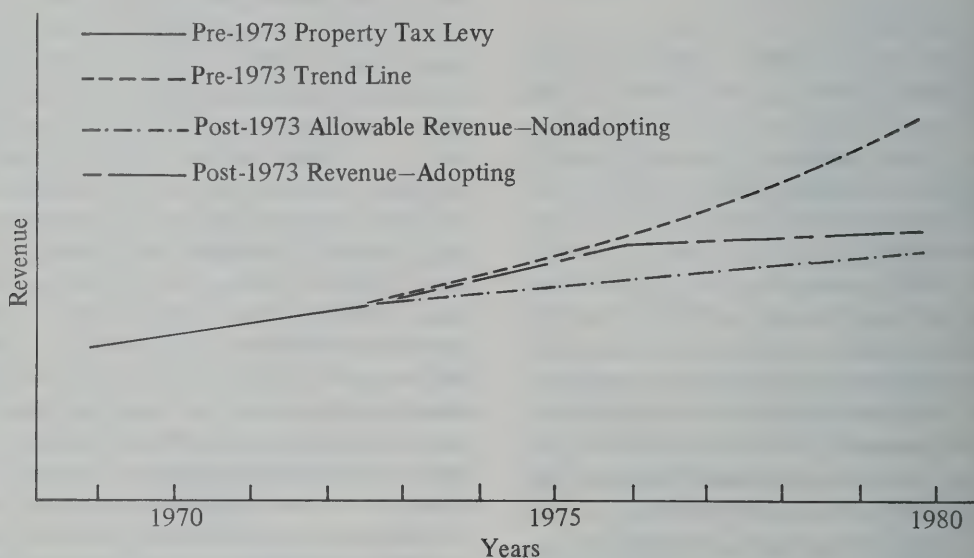
One of the primary sources of property tax relief in the 1973 tax package is the system of property tax controls on local governments. These controls, together with inflation and other forces, put many Indiana local governments in a fiscal "squeeze"; the governments are forced to exist on less money than would have been available had the tax package not been adopted. The typical, and intended, impact of the tax package on local civil governments is illustrated in Figure 2, which shows spendable revenue from local taxes for a hypothetical county. The solid line indicates the amount of revenue produced by the property tax each year up to 1973. From that date, the figure shows three situations. The top line represents the expected trend beyond 1973 in the absence of the tax package. The lowest line in Figure 2 indicates the maximum available revenue after 1973 under the property tax controls for a nonadopting county. The available revenue grows slowly as assessed value increases, but falls increasingly behind revenue expectations prior to 1973. The middle line indicates the revenue attainable if the county adopted a 1% local option income tax in 1973, which shows that some increase in revenue can be attained by becoming an adopting county.

For the first three years, an adopting county has steep increases in spendable revenue because of the increase of certified shares (spendable revenue) from one-fourth of the local option revenue to three-fourths of the revenue as property tax replacement credits decrease.⁴ Even as an adopting county, the

4. Because of this phase-in of spendable revenue, and because an adopting county's property tax levy is frozen at the 1973 level, spendable revenue as an adopting county would be lower than as a nonadopting county if the local option tax were adopted in 1976 or later. For a complete explanation of the local option tax and the phase-in of certified shares, see Kiefer, "Special Tax Issue," pp. 8-12.

FIGURE 2

Spendable Revenue from Local Taxes
for a Hypothetical Indiana County



typical county has less spendable revenue than its trend line prior to 1973, with the gap widening as the years pass.⁵ The typical local school corporation exists under similar conditions; the total of allowable property tax levies plus state distributions do not equal the pre-1973 trend line. Thus, the 1973 tax package limits the growth of spending by local governments.

Of course, these are conditions for the "average" local government or school corporation. Some local governments and schools have more money than they would have had without the tax package; some local governments even have more money than they need and do not levy the maximum allowable property tax. But these governments are not in the majority.

5. This is not an accurate statement for all counties which adopted the local option tax at the 1% rate. Civil governments in some of these counties have kept even with or exceeded their pre-1973 trend line revenues. However, even most of the 1% adopting counties will fall below the pre-1973 trend line after the certified share phase-in.

Some of the proponents of strict property tax controls in 1973 argued that, because there was significant waste in local government spending, local budgets could be decreased without reducing necessary programs. As always, waste has proved difficult to discover and turn into tax savings. A major effect of the strict controls on local revenue has been reduced ability to provide local government services under inflationary conditions. This problem, recognized by the legislature, prompted the \$25 million state revenue sharing program with local civil governments and several increases in state funding for schools. However, these programs have not permanently solved the basic local government funding problems, but have only deferred a crisis.

Thus, local government financial needs are another important issue which must be faced soon, probably in the next legislative session. A number of potential changes in local government finance could ease the revenue shortage. For local governments, the property tax con-

trols could be altered to allow a stated maximum percentage increase in revenue each year, or the controls could be abolished altogether. To make the local option income tax more productive of revenue, the date of the freeze on the property tax levy could be moved forward (either to 1977 or whatever year the local option tax is adopted by a county); the property tax replacement credits of the local option tax could be reduced or eliminated, thus increasing spendable revenue; counties could be allowed to adopt the tax at a higher rate (say 1.5% or 2%); or the tax could be applied to corporations as well as individuals.⁶ Additionally, some local government funding requirements, such as rapidly increasing pension costs, could be alleviated.

For local schools, the alternatives are fewer. Unless programs are cut, the state will have to provide more revenue or schools will have to be allowed to raise more money from property or other taxes. In the absence of some revenue adjustment, the financial squeeze on schools and local civil governments will continue to tighten, and a deterioration of government services could become increasingly visible.

REASSESSMENT

Indiana is presently engaged, somewhat hesitantly, in a statewide reassessment of real property for tax purposes. The reassessment was scheduled to begin in January 1976 using an assessment manual which was to be approved by the State Board of Tax Commissioners in December 1975. The 1976 legislature debated deferring the reassessment for a year, but nothing on the subject reached the gover-

6. An argument in favor of applying the local option tax to corporations is that corporations benefit from the property tax savings the tax provides and so they should pay the tax. However, application of the local option tax to corporations would present considerable compliance and auditing difficulties because of the need to apportion taxable income to the adopting counties.

nor's desk. Nonetheless, reassessment is being delayed; the State Tax Board has not yet, as of this writing, approved the assessment manual.

Reassessment is always unpopular, therefore politically sensitive, because people perceive reassessment as something which increases property taxes. Of course, reassessment does not, in and of itself, raise property taxes. The property tax operates by the following simple formula:

$$\text{Assessed value} \times \text{tax rate} = \text{Tax levy}$$

The tax levy is what the taxpayer is actually concerned about: How much is he or she going to have to pay in taxes? If a reassessment increases the assessed value, the tax levy does not necessarily go up. The tax rate can decline to a point where no increase (or at least no abnormal increase) in the tax levy occurs.

There are two reasons, however, why taxpayers may experience a tax increase as a result of reassessment. One is that the taxing authority may seize upon the opportunity of increased assessments to "reduce" property tax rates, but not quite enough to fully offset the increased tax base, thus producing the magic of simultaneous tax reduction and increased government revenue. Taxpayer suspicion of this phenomenon is well founded historically. A second reason for tax increases, at least for some taxpayers, is that reassessment will not increase the taxable value of all property uniformly. Some property, for example, farm land, has appreciated dramatically since the last reassessment (during 1967-69) and will receive commensurate assessment increases, whereas other property, for example, some inner city residential property, will not increase in value significantly as a result of reassessment. Thus, reassessment causes a shift in the tax base, and those people who own taxable property which has increased in value faster than the average will pay higher taxes even if the total tax levy does not increase. Conversely, other people will pay lower taxes.

The current reassessment is a politically difficult issue for a new and important reason related to the 1973 tax package: Reassessment will alter the intended relationship between civil governments in counties which have adopted the local option income tax and civil governments in counties which have not adopted the tax. The intended relationship, as shown in Figure 2, is that counties should have available somewhat more spendable revenue as adopting counties than as nonadopting counties. But in adopting counties the *property tax levy* is frozen, whereas in nonadopting counties it is the *property tax rate* which is frozen; in other words, nonadopting counties benefit, in terms of an increase in spendable revenue, from an increase in assessed value; adopting counties do not.

Therefore, when the reassessment is reflected in taxable property values (scheduled for 1979), in most counties more spendable revenue will be potentially available as a nonadopting county than as an adopting county. In most cases, the property tax controls will become ineffective in nonadopting counties. This fact may cause adopting counties to repeal the local option tax before 1979—counties can repeal the tax after it has been in effect at least four years—and if this occurs, one of the major sources of property tax relief in the tax package will be eroded.

Some people who oppose the local option income tax may not be troubled by its wide-

spread repeal. If the effect of reassessment on the property tax controls is to be resolved, however, there are several policy options which could be adopted. Perhaps the easiest would be a policy previously mentioned: Change the property tax controls on local civil governments to allow a maximum percentage increase in tax levy each year. This would deny nonadopting counties any greater gain from reassessment than adopting counties.

A second policy alternative would be to reduce the assessment ratio from one-third to a lower fraction calculated so the total taxable value of property in the state would remain nearly constant. Under this plan, reassessment would shift the tax base toward taxpayers with highly appreciated taxable property but would not increase the total tax base. However, this policy would be administratively difficult (what is the appropriate new assessment ratio?) and would cause unintended geographic shifts in the tax base. Reassessment could also be delayed further, but that doesn't really solve the problem. Additionally, the local option income tax and its controls could be repealed at the state level, or all property tax controls on both adopting and nonadopting counties could be repealed, or alternatively, all counties could be forced under the local option tax and its stricter controls. Each of these alternatives requires detailed study and is subject to extensive consideration by the forthcoming legislature.

Income Flows Within Indiana

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Each day thousands of Hoosier workers commute across county lines. In 1974, the latest year for which data are available, the daily commutation of workers led to an annual *net* flow of nearly \$4 billion between counties. Most of that flow stayed within the state, but a total of \$43 million did leave the state.

All forms of employment in Indiana in 1974 generated more than \$21 billion as income for workers and business proprietors. The net outflow of \$43 million, 0.2% of the total, was the result of income inflows and outflows, which were about even for the state. For individual counties, however, the story is quite different. Twenty counties, out of the total ninety-two, had net outflows of income totaling nearly \$2 billion. Primarily the major industrial counties, these areas generated more income than was recorded as receipts by county residents. In the remaining seventy-two counties, the income generated by farms and factories, governments and stores, offices and shops was less than that finally received by the residents. The details of these net income flows are derived from a residence adjustment to basic labor and proprietors income data. The

series is produced by the Bureau of Economic Analysis of the U. S. Department of Commerce and made available to the Indiana University School of Business annually. The accompanying table contains these data for 1974.

For many counties, the net intercounty income flows are of little significance. For example, St. Joseph County (South Bend) had a net outflow of more than \$3 million, but this was only three-tenths of one percent of the income generated in the county and an equal percent of the amount of income received by workers and proprietors residing in the county.¹

In other counties, the amount of the intercounty flow and its relative size are significant. For example, the \$22.5 million net inflow to Brown County is equal to two and one-half times the total amount of income generated in

1. Percentages are computed in the table on the basis of labor and proprietors income after deduction of employees' contributions for Social Security taxes. The residence adjustment made by the Bureau of Economic Analysis is based on commutation information from the 1970 *Census of Population* and subsequent analysis of federal administrative records. The data are estimates.

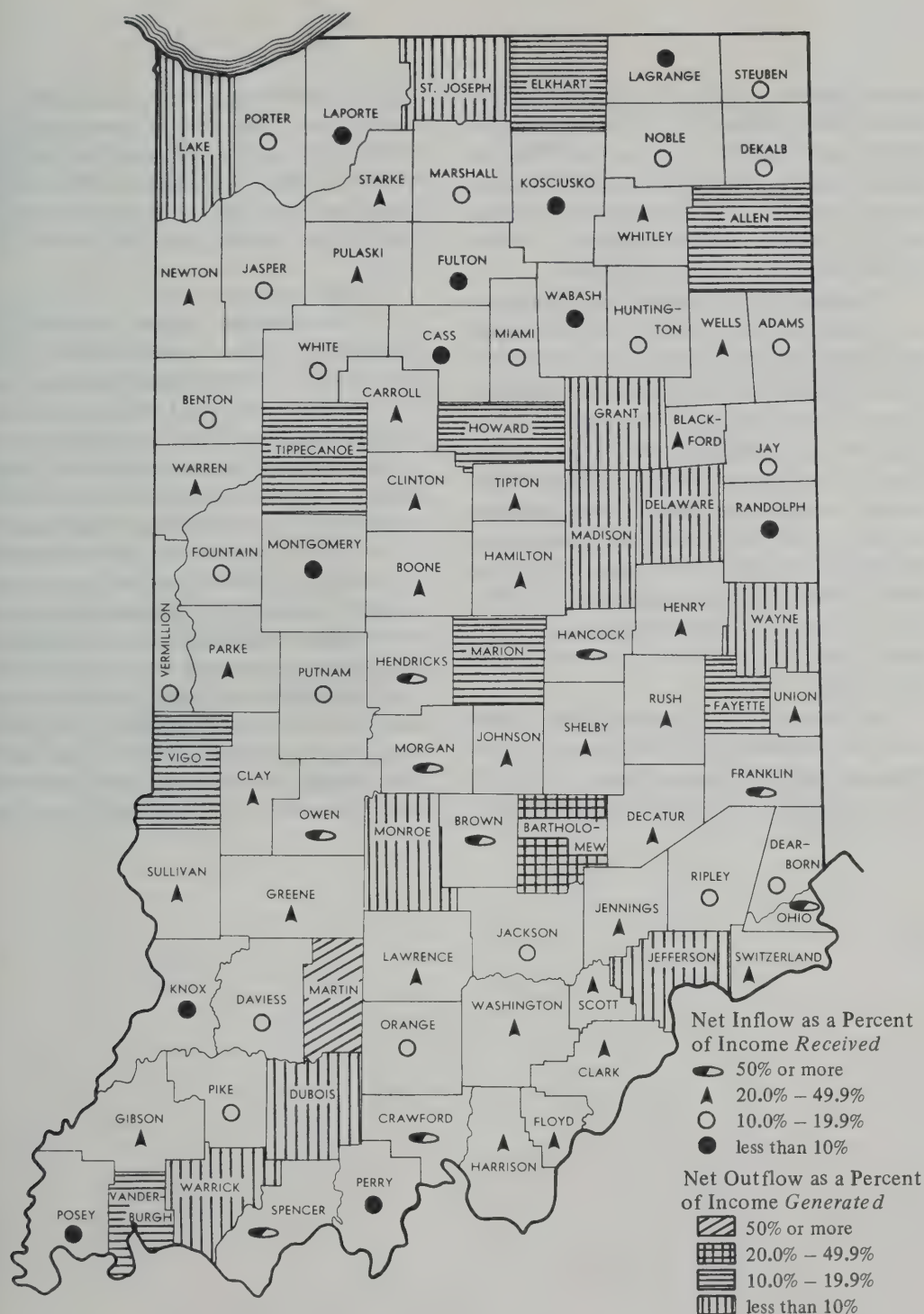
Net Intercounty Flows of Personal Income
Due to Residence Adjustment, 1974

	Residence Adjustment (\$000)	As a Percent of Net Labor and Proprietors' Income by Place of			Residence Adjustment (\$000)	As a Percent of Net Labor and Proprietors' Income by Place of	
		Work	Residence			Work	Residence
Indiana	- 42,876	- 0.2	- 0.2	LaPorte	36,642	9.0	8.3
Adams	13,406	13.9	12.2	Lawrence	26,000	25.1	20.1
Allen	-231,890	-15.2	-17.9	Madison	- 39,746	- 6.6	- 7.1
Bartholomew	- 81,039	-22.3	-28.6	Marion	-812,810	-17.7	- 21.6
Benton	7,533	17.2	14.7	Marshall	21,289	18.4	15.5
Blackford	12,414	26.9	21.2	Martin	- 50,965	-63.1	-170.8
Boone	55,436	70.0	41.2	Miami	17,421	12.0	10.7
Brown	22,524	246.6	71.1	Monroe	- 20,031	- 6.8	- 7.3
Carroll	22,728	49.3	33.0	Montgomery	4,157	3.2	3.1
Cass	14,493	9.4	8.6	Morgan	106,665	174.5	63.6
Clark	83,873	34.2	25.5	Newton	9,899	28.1	21.9
Clay	30,655	82.3	45.1	Noble	23,767	24.2	19.5
Clinton	26,882	26.4	20.9	Ohio	8,606	138.4	58.1
Crawford	10,570	123.4	55.2	Orange	5,639	13.7	12.0
Daviess	14,570	23.9	19.3	Owen	22,964	158.9	61.4
Dearborn	21,818	24.5	19.7	Parke	12,512	43.3	30.2
Decatur	17,185	25.1	20.0	Perry	245	0.5	0.5
DeKalb	18,194	12.6	13.6	Pike	8,264	20.9	17.3
Delaware	- 24,443	- 4.8	- 5.1	Porter	70,102	19.2	16.1
Dubois	- 8,842	- 7.4	- .0	Posey	5,100	6.9	6.4
Elkhart	-107,819	-16.3	-19.4	Pulaski	10,387	26.6	21.0
Fayette	- 22,795	-17.3	-20.9	Putnam	15,105	20.5	17.0
Floyd	89,308	68.9	40.8	Randolph	1,219	1.1	1.1
Fountain	11,168	21.2	17.5	Ripley	9,457	15.5	13.4
Franklin	- 22,693	101.5	50.4	Rush	16,129	31.7	24.1
Fulton	6,815	10.7	9.7	St. Joseph	- 3,075	- 0.3	- 0.3
Gibson	21,211	24.9	20.0	Scott	15,813	41.0	29.1
Grant	- 21,991	- 6.4	- 6.6	Shelby	50,049	49.2	33.0
Greene	24,647	50.6	33.6	Spencer	20,998	68.7	40.7
Hamilton	141,678	90.6	47.5	Starke	26,271	59.7	37.4
Hancock	84,400	111.7	52.8	Steuben	12,550	20.6	17.1
Harrison	31,356	82.1	45.1	Sullivan	12,485	27.3	21.5
Hendricks	148,307	149.3	59.9	Switzerland	4,904	36.9	27.0
Henry	45,704	27.1	21.3	Tippecanoe	- 47,364	-10.2	- 11.3
Howard	- 82,793	-16.1	-19.2	Tipton	25,004	56.5	36.1
Huntington	23,493	20.5	17.0	Union	11,442	76.5	43.3
Jackson	21,867	21.2	17.5	Vanderburgh	- 99,052	- 13.4	- 15.5
Jasper	16,316	20.7	17.1	Vermillion	9,348	21.1	17.4
Jay	10,338	13.2	11.6	Vigo	- 57,884	- 13.3	- 15.3
Jefferson	- 5,767	- 6.1	- 6.5	Wabash	6,060	4.8	4.6
Jennings	20,850	52.4	34.4	Warren	7,949	29.9	23.0
Johnson	118,520	76.8	43.4	Warrick	- 1,136	- 1.0	- 1.0
Knox	3,566	2.9	2.9	Washington	16,245	39.2	28.1
Kosciusko	8,496	4.4	4.2	Wayne	- 25,224	- 8.1	- 8.8
Lagrange	5,691	8.7	8.0	Wells	25,051	31.8	24.1
Lake	-242,890	- 9.4	-10.4	White	11,239	15.4	13.4
				Whitley	28,278	38.8	27.9

the county, and it accounts for more than 71% of the income received by county residents. (It should be noted that we refer to income received as labor and proprietors income and do not include for these purposes other components of income receipts, for example, interest, dividends and transfer payments.)

Most of the twenty counties which had net outflows of income are industrial and metropolitan centers (see map). Martin County had a net outflow equal to 63% of the income generated in the county. Crane Naval Ammunition Depot is located in this county and its employees are widely disbursed throughout the

Net Intercounty Flows of Labor and Proprietors Income



region. Marion County exported, on balance, nearly \$813 million, or 17.7% of the total income generated in that county. This was equal to nearly 22% of the income received by county residents. Stated another way, without the net outflow, income receipts in Marion County would have been 22% higher.

Statements of this sort are too often taken to suggest that Marion County and its resident population would be better off in the inter-county flows could be reduced or terminated. However, these data give no support to such an argument and should not be misused in this fashion. The free movement of citizens from county to county and state to state contributes to the dynamic nature and fundamental strength of the American economy. The inter-county flows reported here indicate the extent to which the welfare of our neighboring counties is of concern to us, for we are all interrelated.

Of the industrial and metropolitan counties with net outflows, the highest percentage was recorded for Bartholomew County. From the data available to us, we cannot determine into

which counties these funds flowed. The map demonstrates quite clearly how these counties with net outflows are somewhat like islands within the state. Bartholomew, Marion, Allen, Tippecanoe and Monroe counties are all surrounded by counties with net inflows of income.

In eight counties of the state, more than half of the residents' income is derived from employment in other counties. Brown County leads the list, but Hendricks, Hancock, Franklin, Crawford, Owen and Morgan counties all derive more than 50% of net labor and proprietors income from the net inflow of income. In all, forty counties derive at least 20% of their income from the commuting of their residents.

We do not have sufficient data to determine the stability of these patterns over time. It would be reasonable to suppose that the extensive increase in suburbanization of employment and population has lead to increased numbers of counties with substantial portions of income involved in intercounty flows. If the relative price of using the automobile does not increase dramatically, we can expect these intercounty flows to become more important in the future.

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by Pradeep Bansod, Gladys Huang and Judy Norman

UNITED STATES-INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA			
EMPLOYMENT		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Nonagricultural employment	July	120.2	120.0	116.5	July	111.8	111.5	108.7
Manufacturing employment	July	97.3	97.2	93.0	July	93.4	94.1	88.5
Average weekly hours (no.)†	July	39.9	40.4	39.2	July	40.9	41.4	40.0
Average weekly earnings (\$)†	July	206.28	208.06	188.55	July	246.22	247.99	218.8
Nonmanufacturing employment	July	129.7	129.5	126.2	July	124.6	123.5	122.7
Unemployment rate (%)	July	7.8	7.5	8.7	July	5.0	5.1	8.5
Unemployment rate—married males (%)	July	4.5	4.4	5.5	—	—	—	—
Continued unemployment claims	—	—	—	—	July	190.6	211.9	490.0
PRODUCTION								
Bituminous coal production	June	124.8	121.8	123.2	May	104.0	126.5	97.2
Industrial electricity production	Jan.	141.5	139.3	134.4	—	—	—	—
Industrial electricity sales	—	—	—	—	June	151.7	148.9	126.1
Manufacturing production	July	130.4	130.0	110.6	June	132.4	133.7	117.2
Raw steel	June	111.0	108.3	83.5	June	137.0	132.6	94.7
CONSTRUCTION								
Construction activity—total	June	184.0	181.1	167.4	June	187.6	185.7	167.1
Residential housing starts	July	108.0	118.8	93.9	June	130.7	105.2	111.0
Residential expenditures	June	221.0	217.1	176.2	June	278.9	275.3	230.5
Nonresidential expenditures	June	165.9	163.6	163.1	June	151.3	149.1	140.9
Public expenditures	June	150.4	141.1	152.3	June	—	—	—
Public works and utilities	—	—	—	—	June	130.4	135.5	130.5
OTHER INDICATORS								
Debits to demand deposits	July	366.0	366.9	322.7	—	—	—	—
Bank debits	—	—	—	—	June	351.5	328.7	320.4
Personal income per capita (\$)	May	6,339.4	6,294.7	5,702.1	1976 I	6,009.60	5,831.50	5,375.00
Passenger car sales (thousands)†	July	865.0	956.0	794.0	June	24.7	23.1	18.3
Year to date (thousands)	July	6,041.0	5,176.0	4,898.0	June	130.3	105.6	99.9

*Current indicators are preliminary and subject to revision.

†Not seasonally adjusted.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for

the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

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UNITED STATES BUSINESS INDICATORS

Quarterly Data

	<i>Seasonally Adjusted Annual Rates (\$ billions)</i>			<i>Percentage Change at Annual Rates</i>		
	<i>1976 2 Qtr.</i>	<i>1976 1 Qtr.</i>	<i>1975 2 Qtr.</i>	<i>1976 2 Qtr.</i>	<i>1976 1 Qtr.</i>	<i>1975 2 Qtr.</i>
Gross national product (GNP)	1,673.0	1,636.2	1,482.3	9.3	12.6	10.4
GNP (\$ 1972)	1,259.4	1,246.3	1,177.1	4.3	9.2	5.6
GNP potential level (\$ 1972)	1,414.6	1,401.6	1,361.8	3.8	3.7	4.0
Government purchases	362.0	354.7	333.2	8.5	1.0	9.7
Personal consumption expenditures	1,064.7	1,043.6	960.3	8.3	13.1	12.1
Private domestic investment	239.2	229.6	164.4	17.8	68.9	-17.3
Corporate profits before tax	145.3	141.1	105.8	12.4	33.4	59.1
Change in business inventories	16.0	14.8	-30.0	—	—	—
Federal surplus—deficit (NIA)	-53.5	-63.8	-99.9	—	—	—

Monthly Data

	Current Levels or Annual Rates				Percentage Change at Annual Rates			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index*	July	171.1	170.2	162.2	July	6.5	6.6	12.6
Consumer price index—food*	July	181.2	181.0	177.8	July	1.3	2.7	24.4
Wholesale price index*	July	182.7	182.1	174.3	July	4.0	4.7	9.4
Money supply (\$ billions)	July	304.8	303.1	291.9	July	6.9	−0.8	3.8
Money supply plus time deposits	July	707.6	700.3	647.5	July	13.3	5.5	10.0
Mobile home shipments (thousands)	June	233.0	260.0	201.0	June	−73.2	203.9	−37.4
Mortgages—outstanding (\$ billions)†	June	299.7	294.8	261.3	June	21.9	18.0	17.2
Mortgages—new issues (\$ billions)†	June	100.3	79.6	71.7	—	—	—	—
Mortgage rate—new homes (%)	July	9.0	8.9	8.9	—	—	—	—
Prime rate business loans (%)	July	7.2	7.2	7.2	—	—	—	—

*Base period, 1967 = 100

†All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	<i>July 1976</i>	<i>June 1976</i>	<i>July 1975</i>	INDIANA	<i>July 1976</i>	<i>June 1976</i>	<i>July 1975</i>
Manufacturing	95.1	96.5	89.4	Manufacturing	94.1	95.4	87.1
Food	95.2	94.0	92.3	Food	83.6	82.3	89.6
Apparel and textiles	96.8	97.0	86.7	Apparel and textiles	84.6	92.0	85.5
Lumber and wood	98.7	99.7	90.3	Lumber and wood	80.6	85.1	68.6
Furniture	103.8	103.0	90.8	Furniture	99.8	100.9	91.2
Paper	97.8	98.7	90.7	Paper	88.6	87.8	84.1
Printing	100.5	100.3	97.8	Printing	94.6	94.5	88.6
Chemicals	103.2	102.6	98.4	Chemicals	105.1	102.9	104.1
Petroleum and coal	108.2	109.4	105.2	Petroleum and coal	75.3	74.7	70.4
Rubber	108.7	109.1	107.7	Rubber	87.7	95.0	92.7
Stone, clay, and glass	99.6	99.6	93.8	Stone, clay, and glass	93.9	93.9	89.9
Primary metals	89.9	89.2	81.3	Primary metals	99.2	96.8	86.0
Fabricated metals	98.8	100.6	90.7	Fabricated metals	101.7	103.3	98.2
Nonelectrical machinery	103.2	101.7	98.3	Nonelectrical machinery	102.5	100.7	94.5
Electrical machinery	92.5	93.7	86.0	Electrical machinery	90.1	95.4	82.6
Transport equipment	86.5	91.8	83.1	Transport equipment	99.6	102.0	83.2

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	June 1976	May 1976	June 1975	REPORTING CITIES	June 1976	May 1976	June 1975
ANDERSON				FRANKFORT			
BD*	207.2	201.2	159.2	CUC	300.5	231.1	1,094.4
CUC†	140.3	119.9	789.7	IES	165.8	186.8	156.7
IES‡	147.2	146.2	139.9	GARY			
BEDFORD				BD	324.8	255.7	284.0
CUC	129.8	125.1	289.2	CUC	133.1	131.5	434.7
IES	153.6	161.1	119.3	IES	174.2	178.1	100.0
BLOOMINGTON				GOSHEN			
BD	374.5	322.5	302.3	BD	300.3	276.3	216.2
CUC	230.4	216.6	515.3	IES	169.1	178.5	151.5
IES	101.9	100.0	94.8	HAMMOND §			
COLUMBUS				IES	145.2	161.5	149.0
BD	446.8	348.4	246.0	HUNTINGTON			
CUC	83.3	96.5	452.2	CUC	319.6	323.2	1,510.4
IES	157.0	161.0	145.4	IES	107.8	134.2	121.1
CONNERSVILLE				INDIANAPOLIS			
BD	232.4	215.1	235.2	BD	457.7	441.7	461.2
CUC	97.7	93.7	794.6	CUC	83.0	75.0	558.6
IES	138.5	141.8	113.8	IES	140.7	143.7	141.8
CRAWFORDSVILLE				JEFFERSONVILLE			
BD	317.1	269.6	266.5	BD	329.5	294.4	287.9
CUC	570.7	728.8	1,072.6	IES	135.9	135.7	123.9
IES	160.1	155.7	151.4	KOKOMO			
EAST CHICAGO				CUC	97.9	95.7	665.7
BD	233.2	204.7	236.5	IES	199.0	191.5	126.4
CUC §	170.5	182.9	386.4	LAFAYETTE			
IES	70.0	79.7	90.2	BD	223.7	211.9	208.9
ELKHART				CUC	329.9	286.0	1,061.1
BD	302.3	254.7	214.5	IES	151.5	142.1	135.8
CUC	169.6	160.6	845.9	LA PORTE			
IES	174.0	141.2	145.7	CUC	307.7	340.3	655.0
EVANSVILLE				IES	188.2	194.8	189.3
BD	275.4	224.7	201.0	LOGANSPOUT			
CUC	98.3	91.9	362.0	BD	375.2	329.0	335.5
IES	137.6	137.1	119.1	CUC	134.7	84.4	483.8
FORT WAYNE				IES	219.6	233.5	175.4
BD	327.1	292.0	265.9	MADISON			
CUC	272.2	214.7	1,374.9	BD	268.9	216.8	226.9
IES	119.2	105.6	98.5	CUC	180.0	163.6	388.2
				IES	135.1	132.9	149.5

INDIANA IN PERSPECTIVE

Sources of Recovery: Percent Changes in Personal Income
Components, Indiana and United States

Percent Change First Quarter 1975-1976
Indiana *United States*

Personal income	11.7	10.2
Labor & proprietors' income	11.6	9.1
Farming	27.4	13.3
Manufacturing	14.6	11.6
Mining	21.7	17.2
Contract construction	3.7	-0.2
Federal government	1.4	6.0
State & local government	13.0	9.1
Dividends, interest, rent	11.2	11.0

MARION			
CUC	119.9	133.9	509.7
IES	128.6	111.8	114.6
MICHIGAN CITY			
BD	316.9	315.0	262.2
CUC	235.8	243.5	686.5
IES	181.9	180.5	169.8
MISHAWAKA			
BD	145.1	138.6	247.6
IES	133.5	125.5	142.2

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of

East Chicago and Hammond are combined

SOURCE: U. S. Dept. of Commerce, Unpublished Data, July 13, 1976.

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	June 1976	May 1976	June 1975
MUNCIE			
BD *	250.4	231.6	257.0
CUC †	112.8	105.8	374.3
IES ‡	113.2	101.2	104.2
NEW ALBANY			
BD	487.5	441.5	401.0
CUC	554.2	558.6	902.4
IES	98.2	101.9	94.8
NEW CASTLE			
BD	335.7	295.7	249.0
CUC	120.3	96.2	536.5
IES	188.0	170.9	123.9
PERU			
BD	347.2	284.9	277.8
CUC	206.4	101.4	389.5
IES	186.1	183.0	163.6
RICHMOND			
BD	225.8	190.1	192.2
CUC	160.6	220.2	567.0
IES	123.6	106.4	109.6
SEYMOUR			
BD	422.3	375.1	360.2
CUC	56.0	51.9	333.3
IES	109.6	115.3	91.6

REPORTING CITIES	June 1976	May 1976	June 1975
SOUTH BEND			
BD	266.9	234.6	202.1
CUC	182.3	193.2	588.1
IES	126.8	104.9	99.1
TERRE HAUTE			
BD	262.3	223.4	245.1
CUC	256.1	229.4	357.1
IES	180.6	177.6	145.1
VALPARAISO			
CUC	172.2	185.6	461.1
IES	185.4	176.3	112.1
VINCENNES			
BD	274.7	258.5	253.1
CUC	121.8	140.5	326.1
IES	147.1	139.1	93.1
WABASH			
BD	234.3	266.2	217.1
CUC	94.0	68.6	584.1
IES	157.1	179.4	130.1

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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Graduate School of Business
Indiana University
Bloomington, Indiana 47401
September 1976

Indiana Business Review

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October 1976

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by Pradeep Bansod, Gladys Huang and Judy Norman

UNITED STATES—INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA			
EMPLOYMENT		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Nonagricultural employment		Aug.	120.6	120.3		Aug.	112.0	111.8
Manufacturing employment		July	97.3	97.2		Aug.	93.4	93.4
Average weekly hours (no.)†		Aug.	39.9	40.0		Aug.	40.7	40.7
Average weekly earnings (\$)†		Aug.	207.48	207.60		Aug.	245.8	245.0
Nonmanufacturing employment		Aug.	130.1	129.8		Aug.	124.3	124.6
Unemployment rate (%)		Aug.	7.9	7.8		Aug.	5.2	5.0
Unemployment rate—married males (%)		Aug.	4.2	4.5		—	—	—
Continued unemployment claims		—	—	—		Aug.	217.4	190.6
PRODUCTION								
Bituminous coal production		July	106.7	125.3		May	104.0	126.5
Industrial electricity production		April	142.0	144.3		—	—	—
Industrial electricity sales		—	—	—		July	148.6	151.7
Manufacturing production		Aug.	131.5	131.0		July	135.1	132.4
Raw steel		July	112.9	111.0		July	117.6	104.0
CONSTRUCTION								
Construction activity—total		July	182.7	185.5		July	191.2	187.6
Residential housing starts		Aug.	120.0	108.3		July	163.7	130.7
Residential expenditures		July	227.7	221.8		July	288.3	278.9
Nonresidential expenditures		July	160.7	167.8		July	152.7	151.3
Public expenditures		July	142.7	151.6		—	—	—
Public works and utilities		—	—	—		July	127.8	130.4
OTHER INDICATORS								
Debits to demand deposits		July	366.0	366.9		—	—	—
Bank debits		—	—	—		July	339.4	351.5
Personal income per capita (\$)		June	6,370.5	6,339.4		—	—	—
Passenger car sales (thousands)†		Aug.	761.0	865.0		July	23.4	24.7
Year to date (thousands)		Aug.	6,802.0	6,041.0		July	153.7	130.3

*Current indicators are preliminary and subject to revision.

†Not seasonally adjusted.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for

the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Information appearing in the *Indiana Business Review Data Supplement*, unless otherwise noted, is derived from material obtained by the Division of Research for instruction in the School of Business and for studies published by the Division.

The *Indiana Business Review Data Supplement* is published monthly by the Division of Research, Graduate School of Business, Indiana University. Subscriptions to the *Indiana Business Review* and to the *Data Supplement* are available to residents of Indiana without charge.

Spendable Average Weekly Earnings by County (third quarter 1975)

(Editor's Note—This series is produced from data provided by the Indiana Employment Security Division. It is derived by deducting federal income taxes and social security taxes from gross average weekly earnings for each county.)

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings	% Change Since Last Quarter
		All	Manu- facturing	All	% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter		
Adams	7,467	175.08	196.69	156.63	8.8	172.56	6.6	1,169,478	9.7
Allen	114,020	206.23	269.42	179.59	4.5	227.85	6.0	20,477,297	6.4
Bartholomew	24,389	233.76	278.23	200.14	7.4	235.09	9.1	4,881,232	7.2
Benton	1,718	197.85	160.02	18.4	145.09	5.4	297,869	13.2	13.2
Blackford	3,635	173.26	207.66	155.28	8.4	180.65	12.5	564,511	5.7
Boone	5,916	157.84	211.31	143.40	7.1	183.34	7.8	848,375	6.2
Brown	888	91.04	141.96	85.71	2.6	132.77	-3.5	76,086	-7.4
Carroll	3,004	158.47	156.22	143.89	9.5	142.15	4.6	432,244	11.5
Cass	11,309	181.73	209.08	161.53	8.0	181.69	5.1	1,826,684	10.3
Clark	18,328	177.78	242.17	158.62	5.3	206.72	9.3	2,907,083	-2.9
Clay	3,125	159.35	169.17	144.57	5.9	152.21	-0.1	451,825	5.9
Clinton	7,248	159.94	175.44	145.02	11.0	156.89	12.4	1,051,176	9.5
Crawford	579	135.15	95.24	127.24	4.8	89.67	-0.6	73,674	0.8
Daviess	4,963	153.43	208.89	140.06	11.9	181.55	16.4	695,102	14.3
Dearborn	6,894	200.77	247.51	175.57	3.8	210.91	1.9	1,210,422	3.3
Decatur	5,008	181.01	211.19	161.00	14.5	183.25	14.0	806,228	11.5
Dekalb	8,152	178.85	214.02	159.41	7.7	185.34	5.7	1,299,479	8.8
Delaware	37,852	203.10	273.94	177.29	5.1	231.52	6.2	6,710,675	7.8
Dubois	12,536	167.52	184.36	150.95	8.3	163.47	11.5	1,892,336	9.0
Elkhart	55,880	198.14	229.44	173.63	7.2	196.76	8.4	9,702,310	7.0
Fayette	10,467	195.92	224.78	171.99	6.3	193.27	7.3	1,800,296	4.3
Floyd	11,062	162.14	182.91	146.74	4.6	162.40	5.6	1,623,216	6.6
Fountain	3,961	153.10	176.69	139.85	5.2	157.81	6.9	553,906	5.8
Franklin	1,443	138.72	168.99	130.60	11.6	152.08	5.9	188,463	13.2
Fulton	4,079	164.70	189.39	148.74	12.1	167.18	13.0	606,723	15.4
Gibson	6,387	174.44	223.94	156.15	12.0	192.65	16.4	997,412	14.0
Grant	26,182	210.96	253.22	183.08	10.1	215.36	11.4	4,793,483	12.8
Greene	3,875	152.11	195.49	139.24	9.4	171.67	20.4	539,541	21.2
Hamilton	12,038	178.35	212.28	159.04	6.0	184.05	3.1	1,914,493	7.3
Hancock	5,505	172.16	241.06	154.47	1.7	205.86	1.3	850,377	4.6
Harrison	3,184	147.74	169.35	136.45	8.8	152.35	8.6	434,446	6.4
Hendricks	6,286	174.26	205.55	156.02	5.9	179.09	8.6	980,806	3.1
Henry	10,675	206.64	283.59	179.90	10.7	239.55	14.0	1,920,386	11.0
Howard	34,877	245.92	305.51	209.66	10.1	257.81	12.2	7,312,408	13.6
Huntington	10,095	157.62	179.90	143.23	4.5	160.18	5.9	1,445,993	6.9
Jackson	8,018	156.88	169.80	142.66	4.9	152.70	5.9	1,143,871	4.1
Jasper	4,175	161.78	174.09	146.46	4.7	155.90	12.1	611,426	3.3
Jay	5,933	168.70	193.59	151.85	6.9	170.27	6.9	900,896	3.4
Jefferson	7,233	159.73	182.73	144.86	8.8	162.27	16.0	1,047,765	1.9
Jennings	3,740	162.95	184.78	147.38	3.5	163.78	7.6	551,184	5.3
Johnson	12,040	160.60	218.21	145.54	6.4	188.43	8.4	1,752,337	6.9
Knox	8,928	160.06	199.17	145.12	6.6	174.39	1.9	1,295,604	8.0
Kosciusko	15,734	182.40	219.04	162.02	9.8	189.04	8.2	2,549,224	6.9
Lagrange	4,177	167.78	193.85	151.15	5.7	170.47	2.8	631,344	1.8
Lake	170,677	243.65	304.83	207.88	6.1	257.24	6.9	35,480,877	5.6
Laporte	31,895	186.73	217.29	165.22	7.4	187.75	9.4	5,269,565	5.8
Lawrence	8,194	198.30	244.02	173.75	5.0	208.17	5.1	1,423,622	6.6

CATORS

County	Employment	Average Weekly Earnings		Quarterly Data					July 1975	
		All	Manu- facturing	(\$ billions)						
				1975 1 Qtr.	1976 2 Qtr.	1976 1 Qtr.	1975 2 Qtr.			
son	43,736	235.54	300.68	201.8	82.3	9.9	12.6	10.4		
on	326,009	215.23	272.86	186.7	77.1	4.5	9.2	5.6	989.2	
hall	9,096	167.43	197.77	150.8	61.8	3.8	3.7	4.0	152.0	
n	1,759	160.93	173.43	145.8						
i	6,609	146.87	163.78	135.8	33.2	8.5	1.0	9.7	276.0	
oe	29,563	168.57	182.46	151.7	60.3	8.3	13.1	12.1	392.0	
					64.4	17.8	68.9	-17.3	94.8	
gomery	9,309	195.09	242.72	171.1	55.8				238.2	
an	5,000	145.44	178.18	134.5	30.0	15.3	33.4	59.1	153.7	
on	2,257	147.21	142.67	136.5	29.9	—	—	—		
e	7,424	164.59	189.11	148.8		—	—	—	148.3	
	286	106.96	149.10	100.7						
ge	3,729	144.03	142.91	134.6					968.2	
a	940	127.70	176.46	120.7					116.0	
	1,729	138.90	142.02	130.5						
	4,160	160.07	179.25	145.5					438.6	
	3,326	321.64	165.88	270.5					288.0	
									140.2	
r	25,487	242.39	322.62	206.5	162.2	July	5.8	5.8	12.6	274.4
y	5,391	217.33	279.79	187.5	177.5	Aug.	4.0	1.3	-2.0	134.8
ki	1,859	170.12	198.98	152.5	176.0	Aug.	-1.3	4.0	12.4	
m	5,426	173.12	234.95	155.5						406.0
olph	7,630	185.59	208.45	164.5	293.2	Aug.	6.1	6.9	5.5	141.2
					650.6	Aug.	10.3	13.3	5.9	
					213.0	July	-37.7	-73.2	100.5	199.9
y	5,478	177.45	216.97	158.5						1,033.4
	3,115	164.06	218.80	148.5						126.5
oseph	79,218	197.45	251.26	173.5	264.5	July	18.4	21.5	15.3	
t	3,207	148.56	164.14	136.5	66.0	—	—	—	—	605.7
oy	8,247	163.15	184.76	147.5	8.9	—	—	—	—	184.8
					7.7	—	—	—	—	
cer	2,332	158.76	174.34	144.5						325.2
ce	2,639	150.46	189.41	138.5						380.4
ben	4,891	162.14	219.36	146.5						221.3
van	2,919	180.85	139.93	160.5						
erland	855	140.99	143.09	132.5						
										200.3
										371.3
ecanoe	38,695	187.68	247.61	165.5						100.9
on	2,448	184.53	226.66	163.5						
	552	158.25	241.75	143.5						434.3
erburgh	65,428	183.20	215.14	162.5						109.1
illion	2,792	208.84	245.15	181.5						
										260.0
	38,792	188.01	221.92	166.5						613.8
sh	10,759	170.88	196.00	153.5						171.9
n	1,165	191.57	—	168.5						
ck	8,148	265.61	332.26	224.5						258.7
ington	3,859	137.84	142.06	129.5						135.5
ne	24,136	182.52	231.39	165.5						
	5,878	181.59	228.41	161.5						
	5,164	159.95	174.36	144.5						
ley	5,417	169.63	189.77	151.5						
Classified	40,782	237.53	283.75	201.5						

Table Average Weekly Earnings by County, *Continued*

County	Employment	Average Weekly Earnings		Spendable Average Weekly Earnings				Aggregate Weekly Spendable Earnings	% Change Since Last Quarter
		All	Manu- facturing	All	% Change Since Last Quarter	Manu- facturing	% Change Since Last Quarter		
Adams	43,736	235.54	300.68	201.53	5.3	253.79	3.9	8,814,370	6.9
Allen	326,009	215.23	272.86	186.23	5.6	230.62	6.1	60,712,356	6.5
Armstrong	9,096	167.43	197.77	150.88	6.8	173.36	6.8	1,372,345	1.6
Bartholomew	1,759	160.93	173.43	145.80	10.7	155.41	6.9	256,408	12.2
Benton	6,609	146.87	163.78	135.89	5.9	148.02	6.2	898,161	10.5
Bloomington	29,563	168.57	182.46	151.75	1.9	162.07	8.2	4,486,246	6.3
Bourbon	9,309	195.09	242.72	171.38	2.2	207.16	-0.6	1,595,318	1.9
Brown	5,000	145.44	178.18	134.98	7.7	158.91	8.5	674,868	4.6
Butler	2,257	147.21	142.67	136.11	11.3	133.22	1.1	307,198	15.4
Carroll	7,424	164.59	189.11	148.66	6.2	166.97	4.2	1,103,680	5.5
Cass	286	106.96	149.10	100.70	7.1	137.31	61.2	28,801	-6.8
Champaign	3,729	144.03	142.91	134.09	13.1	133.37	10.0	499,959	7.0
Crawford	940	127.70	176.46	120.23	8.3	157.64	5.9	113,016	6.8
Decatur	1,729	138.90	142.02	130.77	7.3	132.81	1.9	226,065	6.9
DeKalb	4,160	160.07	179.25	145.12	7.4	159.70	7.8	603,767	4.6
Delaware	3,326	321.64	165.88	270.76	21.0	149.67	12.3	900,545	34.1
Dubois	25,487	242.39	322.62	206.90	5.5	271.52	6.6	5,273,118	4.7
Dugess	5,391	217.33	279.79	187.78	7.9	236.39	9.2	1,012,245	9.1
Elkhart	1,859	170.12	198.98	152.94	10.6	174.25	15.1	284,372	8.8
Franklin	5,426	173.12	234.95	155.18	4.2	201.07	4.7	842,066	8.4
Fulton	7,630	185.59	208.45	164.38	3.7	181.23	1.5	1,254,130	7.6
Gibson	5,478	177.45	216.97	158.37	10.5	187.51	13.4	867,572	9.8
Grant	3,115	164.06	218.80	148.24	8.3	188.86	10.4	461,826	7.7
Greene	79,218	197.45	251.26	173.12	3.8	213.86	1.3	13,714,269	5.5
Hamilton	3,207	148.56	164.14	136.97	-5.0	148.31	-6.1	439,258	-14.6
Hancock	8,247	163.15	184.76	147.53	9.4	163.76	10.9	1,216,645	8.5
Harrison	2,332	158.76	174.34	144.11	15.4	156.08	6.7	336,120	13.2
Howard	2,639	150.46	189.41	138.18	13.6	167.19	12.0	364,605	9.7
Indiana	4,891	162.14	219.36	146.74	13.0	189.27	16.4	717,668	7.8
Jackson	2,919	180.85	139.93	160.88	12.0	131.48	19.5	469,664	9.9
Jefferson	855	140.99	143.09	132.15	22.9	133.49	23.1	112,944	22.3
Jones	38,695	187.68	247.61	165.92	2.5	210.98	6.2	6,420,082	4.0
Knox	2,448	184.53	226.66	163.59	15.7	194.66	21.2	400,533	8.5
Lamar	552	158.25	241.75	143.72	9.1	206.40	26.7	79,285	-0.5
Landerburg	65,428	183.20	215.14	162.61	2.7	186.16	0.6	10,639,413	2.2
Larimer	2,792	208.84	245.15	181.52	9.0	209.06	4.8	507,887	10.2
Laurens	38,792	188.01	221.92	166.16	6.3	191.16	7.4	6,445,615	8.4
Lawrence	10,759	170.88	196.00	153.53	8.6	172.05	8.2	1,651,737	10.9
Leitch	1,165	191.57	-	168.78	4.4	-	-	196,578	7.7
Liberty	8,148	265.61	332.26	224.90	3.0	279.12	0.1	1,832,425	4.5
Linn	3,859	137.84	142.06	129.78	12.1	132.83	13.9	500,850	17.0
Litchfield	24,136	182.52	231.39	162.11	5.7	198.29	6.8	3,912,735	4.0
Louisville	5,878	181.59	228.41	161.43	11.2	195.95	12.1	948,864	11.7
Madison	5,164	159.95	174.36	145.03	15.1	156.10	15.9	748,891	7.0
Martinsville	5,417	169.63	189.77	152.57	7.6	167.46	4.8	826,405	11.6
Meigs	40,782	237.53	283.75	203.09	4.8	239.69	3.0	8,282,440	2.0

UNITED STATES BUSINESS INDICATORS

Quarterly Data

	Seasonally Adjusted Annual Rates (\$ billions)			Percentage Change at Annual Rates		
	1976	1976	1975	1976	1976	1975
	2 Qtr.	1 Qtr.	2 Qtr.	2 Qtr.	1 Qtr.	2 Qtr.
Gross national product (GNP)	1,675.2	1,636.2	1,482.3	9.9	12.6	10.4
GNP (\$ 1972)	1,260.0	1,246.3	1,177.1	4.5	9.2	5.6
GNP potential level (\$ 1972)	1,414.6	1,401.6	1,361.8	3.8	3.7	4.0
Government purchases	362.0	354.7	333.2	8.5	1.0	9.7
Personal consumption expenditures	1,064.7	1,043.6	960.3	8.3	13.1	12.1
Private domestic investment	239.2	229.6	164.4	17.8	68.9	-17.3
Corporate profits before tax	146.2	141.1	105.8	15.3	33.4	59.1
Change in business inventories	16.0	14.8	-30.0	-	-	-
Federal surplus-deficit (NIA)	-54.1	-63.8	-99.9	-	-	-

Monthly Data

	Current Levels or Annual Rates				Percentage Change at Annual Rates			
		Latest Month	Previous Month	One Year Ago		Latest Month	Previous Month	One Year Ago
Consumer price index*	July	170.9	170.1	162.2	July	5.8	5.8	12.6
Consumer price index—food*	Aug.	181.8	181.2	177.5	Aug.	4.0	1.3	−2.0
Wholesale price index*	Aug.	182.5	182.7	176.0	Aug.	−1.3	4.0	12.4
Money supply (\$ billions)	Aug.	306.3	304.8	293.2	Aug.	6.1	6.9	5.5
Money supply plus time deposits	Aug.	713.4	707.6	650.6	Aug.	10.3	13.3	5.9
Mobile home shipments (thousands)	July	224.0	233.0	213.0	July	−37.7	−73.2	100.5
Mortgages—outstanding (\$ billions)†	July	303.8	299.6	264.5	July	18.4	21.5	15.3
Mortgages—new issues (\$ billions)†	July	93.4	100.0	66.0	—	—	—	—
Mortgage rate—new homes (%)	Aug.	9.0	9.0	8.9	—	—	—	—
Prime rate business loans (%)	Aug.	7.0	7.3	7.7	—	—	—	—

*Base period, 1967 = 100

†All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Aug.	July	Aug.	INDIANA	Aug.	July	Aug.
	1976	1976	1975		1976	1976	1975
Manufacturing	97.6	95.5	93.3	Manufacturing	93.7	93.6	88.7
Food	94.9	94.8	94.3	Food	80.3	84.3	88.6
Apparel and textiles	93.5	95.8	87.6	Apparel and textiles	84.8	82.3	88.1
Lumber and wood	101.0	101.2	91.8	Lumber and wood	78.9	79.1	79.3
Furniture	101.6	103.0	93.4	Furniture	95.8	98.9	91.3
Paper	98.6	99.0	92.6	Paper	86.7	89.0	86.7
Printing	100.6	101.3	98.4	Printing	98.9	95.6	93.3
Chemicals	102.3	103.2	99.3	Chemicals	101.2	102.8	104.5
Petroleum and coal	109.3	108.2	105.1	Petroleum and coal	68.0	75.9	83.3
Rubber	106.6	107.5	109.4	Rubber	87.3	87.9	97.2
Stone, clay, and glass	97.7	99.1	94.7	Stone, clay, and glass	93.5	93.9	92.3
Primary metals	93.7	89.7	85.6	Primary metals	98.1	96.6	87.9
Fabricated metals	101.5	100.0	93.7	Fabricated metals	100.6	101.0	98.8
Nonelectrical machinery	102.9	103.0	98.2	Nonelectrical machinery	102.8	103.6	94.8
Electrical machinery	93.1	92.8	87.3	Electrical machinery	90.6	90.1	84.4
Transport equipment	89.2	88.4	84.3	Transport equipment	102.1	100.7	85.5

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	July 1976	June 1976	July 1975
ANDERSON			
BD*	214.5	207.2	164.7
CUC†	255.9	140.3	586.7
IES‡	135.2	147.2	136.5
BEDFORD			
CUC	158.3	129.8	299.8
IES	148.4	153.6	132.1
BLOOMINGTON			
BD	303.3	374.5	301.1
CUC	240.1	230.4	490.6
IES	101.3	101.9	92.7
COLUMBUS			
BD	312.6	446.8	348.3
CUC	119.3	83.3	395.4
IES	156.4	157.0	140.2
CONNERSVILLE			
BD	211.4	232.4	183.1
CUC	104.2	97.7	446.9
IES	142.3	138.5	111.4
CRAWFORDSVILLE			
BD	128.1	317.1	266.6
CUC	666.8	570.7	1,008.6
IES	160.2	160.1	148.9
EAST CHICAGO			
BD	223.9	233.2	208.3
CUC §	185.2	170.5	399.1
IES	70.0	70.0	83.3
ELKHART			
BD	265.7	302.3	225.2
CUC	183.9	169.6	638.8
IES	153.2	174.0	146.7
EVANSVILLE			
BD	235.3	275.4	193.3
CUC	131.7	98.3	319.7
IES	108.7	137.6	122.9
FORT WAYNE			
BD	311.6	327.1	265.3
CUC	229.9	272.2	1,203.3
IES	109.2	119.2	92.4

INDIANA IN PERSPECTIVE

State Government Finances, Fiscal 1975
(millions of dollars)

	General Revenues*	General Expenditures*	Deficit
United States	134,611	138,304	3,693
Indiana	2,902	3,002	100
Illinois	6,789	7,119	330
Kentucky	2,185	2,033	152
Michigan	5,974	6,500	526
Ohio	5,111	5,449	338

*Revenues and expenditures exclude insurance trusts,
liquor stores, borrowing and debt redemption.

SOURCE: U. S. Dept. of Commerce News, Sept. 8, 1976.

INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	July 1976	June 1976	July 1975
MUNCIE			
BD *	233.3	250.4	239.4
CUC †	98.5	112.8	263.9
IES ‡	101.8	113.2	103.1
NEW ALBANY			
BD	370.1	487.5	369.2
CUC	499.6	554.2	865.2
IES	95.6	98.2	95.8
NEW CASTLE			
BD	287.1	335.7	256.5
CUC	122.1	120.3	452.8
IES	181.6	188.0	130.8
PERU			
BD	258.0	347.2	247.1
CUC	274.8	206.4	454.8
IES	189.7	186.1	171.7
RICHMOND			
BD	151.5	225.8	165.3
CUC	199.5	160.6	561.0
IES	41.2	123.6	106.0
SEYMOUR			
BD	377.1	422.3	314.9
CUC	36.3	56.0	296.3
IES	121.6	109.6	96.6

*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales

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*Bank Debits
†Continued Unemployment Claims
‡Industrial Electricity Sales
§Continued Unemployment Claims of
East Chicago and Hammond are combined

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INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	July 1976	June 1976	July 1975	REPORTING CITIES	July 1976	June 1976
MUNCIE				SOUTH BEND		
BD *	233.3	250.4	239.4	BD	239.0	266.9
CUC †	98.5	112.8	263.9	CUC	145.1	182.3
IES ‡	101.8	113.2	103.1	IES	109.9	126.8
NEW ALBANY				TERRE HAUTE		
BD	370.1	487.5	369.2	BD	257.6	262.3
CUC	499.6	554.2	865.2	CUC	236.1	256.1
IES	95.6	98.2	95.8	IES	145.1	180.6
NEW CASTLE				VALPARAISO		
BD	287.1	335.7	256.5	CUC	138.2	172.2
CUC	122.1	120.3	452.8	IES	186.7	185.4
IES	181.6	188.0	130.8	VINCENNES		
PERU				BD	243.8	274.7
BD	258.0	347.2	247.1	CUC	127.4	121.8
CUC	274.8	206.4	454.8	IES	152.7	147.1
IES	189.7	186.1	171.7	WABASH		
RICHMOND				BD	199.1	234.3
BD	151.5	225.8	165.3	CUC	157.2	94.0
CUC	199.5	160.6	561.0	IES	155.7	157.1
IES	41.2	123.6	106.0			
SEYMOUR						
BD	377.1	422.3	314.9			
CUC	36.3	56.0	296.3			
IES	121.6	109.6	96.6			

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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OUTLOOK EDITION



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Highlights of the Outlook—A Message from the Dean 1

The Outlook for 1977 2

Government Purchases of Goods and Services 6

Business Fixed Investment 9

Residential Construction 10

Inventories 11

Net Exports 11

Personal Consumption Expenditures 12

The Indiana Economy

Introduction 15

Indianapolis 15

Fort Wayne 17

Richmond 18

Terre Haute 19

South Bend-Elkhart 20

Muncie 22

Jeffersonville-New Albany 23

Evansville 25

Gary-Hammond-East Chicago 27

School of Business / Indiana University

HIGHLIGHTS OF THE OUTLOOK—A MESSAGE FROM THE DEAN

By most measures, 1977 will be a stronger year than 1976 for the American economy. Indiana's major communities will share in the resumption of a more steady recovery from the recent recession. This is the conclusion to be drawn from the economic forecast presented in the following pages.

The year ahead is always obscured by a curtain of question marks. Our "Outlook" writers, with appropriate humility, have examined the leading questions and prepared a thoughtful exposition of our national and state prospects. With some tax rebate or rate reduction a strong likelihood, we can expect

- ☐ a resumption of economic expansion in mid-1977 that will hold through the end of the year

- ☐ a moderate increase in the rate of inflation

- ☐ a gradual decrease in the rate of unemployment

- ☐ an upward movement in long-term interest rates while short-term rates remain steady or even fall at least until the recovery regains its momentum

- ☐ a minor increase in federal purchases with more stimulative effect than in 1976

- ☐ continued conservative state and local financial policies with some expenditure increases as rising tax revenues materialize

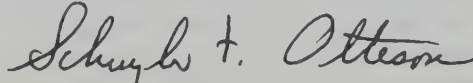
- ☐ cautious increases in plant and equipment outlays by business including prudent inventory accumulation

- ☐ modest but sustained single-family residential construction subject to considerable regional variation

- ☐ a net export surplus if the expected oil price increase is moderate

- ☐ a relatively strong market for new cars as part of a progressively stronger pattern of consumer spending.

This "Outlook" for the nation and nine Indiana areas, including for the first time the Richmond area, clearly anticipates an improving economy. We are pleased to make these views available to the business and government leadership of the state. Together we can look forward to a year of renewed economic strength.



Schuyler F. Otteson, Dean
School of Business
Indiana University

The Outlook for 1977

The Outlook for Real Economic Activity. The current economic recovery is now in its seventh consecutive quarter of expansion. The real growth of the economy appeared to gather strong momentum in the first quarter of this year, with real output up over 9% on a seasonally adjusted annual basis. However, production exceeded final sales by a large margin in the first quarter, with the swing from inventory liquidation to accumulation accounting for at least half of the growth of real output in that quarter. Although inventory accumulation continued in the second quarter of this

EDITOR'S NOTE: This section of the Outlook was prepared by Robert C. Turner, Distinguished Professor of Business Economics and Public Policy, Eugene Brady, chairman and professor of Business Economics and Public Policy, with the assistance of Jack Wentworth, professor of Business Administration, who prepared the outlook for automobiles, and Ronald F. Rost, faculty lecturer in Business Economics and Public Policy, who prepared the section on inventories.

year, no comparable swing occurred, and the real rate of growth of GNP fell from 9.2% in the first quarter to 4.5% in the second quarter. However, the real growth of final sales was about the same in each of the first two quarters. Real growth for the third quarter was somewhat lower—about 3.8%. This is somewhat under the figure that most forecasters had been anticipating, and most of the major forecasting services have lowered their fourth quarter estimates of real growth.

If there is such a thing as a “normal recovery,” it is usually initiated by an increase in consumer spending, followed by a buildup of inventories in anticipation of continued increases in consumer outlays, and finally resulting in an increase in capital spending. The first two stages of this three-stage lift-off have already taken place, but the third stage is not following as it has in the past.

Capital spending has been below expectations. The lag in capital spending is at least

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partially due to memories of the 1973-74 experience, when heavy capital spending suddenly ran into an abrupt decline in final demand. Business executives have been uneasy about the strength and durability of the recovery, and are waiting to see if it gains momentum.

The net effect has been a continued but slow rise in constant dollar GNP since the first quarter, with the unemployment rate holding close to 8%. The Ford strike played a role in the recent slowdown, but not a major one. It seems probable that the current sluggishness will continue throughout the remainder of this year, with economic conditions being somewhat like what they were during the 1960 recession. If this proves to be the case, two governmental actions are probable. First, the Federal Reserve will act to further ease money rates, the recent cut in the discount rate being only a symbolic first step. Whether the Fed will wait until after the turn of the year or not is uncertain. Chairman Burns, fearful of aggravating inflationary pressures, may delay action until it is obvious to everyone that action is needed. We believe that Federal Reserve action will be taken before then, perhaps tentatively and in a limited way, despite recent gyrations in the money supply.

The narrowly defined money supply (M_1) has been jumping around all over the place. These erratic movements have little meaning. What counts is the longer-term trend which has been moderately upward, less indeed than has been usual in this stage of a recovery.

The other action—more important in the short run—is a tax stimulus shortly after President-elect Carter takes office. If our forecast of continued sluggish growth in the fourth quarter proves to be correct, action of some sort seems highly possible. Far less certain is the form the tax action might take. The simplest is a rebate, similar to the 1975 rebate. A rebate would be a “shot in the arm” but would have a short-run effect. Another possible action is a temporary

tax cut, expiring perhaps on December 31, 1977. Such a cut would have a more gradual but longer-run effect. A third possibility is a permanent tax cut, which would have the maximum, long-run stimulative effect. A permanent tax cut in one sense is desirable; it tends to offset the adverse effects of inflation on the percentage of income that people pay as inflation pushes them into higher income tax brackets. On the other hand, President-elect Carter has promised further tax reform (the Tax Reform Act of 1976 actually accomplished little basic reform except in the estate tax), and it is easier to get tax reforms through the Congress when taxes are cut than when they are not.

Whatever the form, we are assuming a tax action to stimulate the economy before 1977 is very far along. This tax action, coupled with a modest but significant rise in capital spending and a good year for automobile sales, should produce a resumption of the expansion in the second and third quarters of 1977, chiefly in the latter quarter. We think that the expansion will hold in the fourth quarter, though at a decreasing rate.

The net effect is a good rise in real GNP in the last three quarters of 1977, though falling far short of boom levels. The unemployment rate will remain above 6% even at the end of the year. Capacity utilization rates in manufacturing will still be well below preferred operating rates on average, though some instances of capacity bottlenecks may reappear. Aggregate *demand-pull* inflationary pressures (demand rising faster than supply can be increased) will not be significant. This does not mean, however, that inflation is not a continuing threat to the recovery, as the next section discusses in some detail.

The Outlook for Inflation. The current rate of inflation has been lower than most forecasters were anticipating only six months ago.

The Consumer Price Index increased by only 5.3% from October 1975 to October 1976, and this relatively low rate—"low" relative to recent years—was fairly well sustained during the year. The low point of the inflation rate was in the first quarter of this year, when food and gasoline prices actually declined. Subsequently, the rate of inflation drifted upward to a 6.0% seasonally adjusted annual rate in August; food prices rose by less than the average of all items, and service prices by more than the average, about 7.2%. The inflation rate declined in September and again in October to 3.6%, the lowest rate in seven months.

We are more pessimistic about inflation in 1977 (and 1978) than most forecasters, due largely to our belief that the basic character of the inflationary process now is different than it has been in the past. Viewed historically, inflationary periods have been interrupted with intervals of deflation or of price stability, so that the long-run trend of inflation was one of relative moderation. However, in the past three decades or so, inflation has been chronic. Since 1955, the Consumer Price Index has risen in every single year, despite the ups and downs of the business cycle.

If the postwar pattern of economic recovery provides any clue to the inflationary nature of the current recovery, we should expect significantly higher prices in the coming year. Normally, in the first year of so of recovery from a recession, productivity gains permit a substantial increase in output without inflationary pressures. If one examines the rate of inflation following the 1954 recession, the 1958 recession and the 1960 recession, the consumer price level was rising at about 1% per year after one year of recovery. A year after the 1969-70 recession, prices were going up only about 3.3%. However, except for September and October, consumer prices have been rising about 5% to 6% (annual rate). Although this is much lower than the double-digit rates of 1973-74, it is still high by historical standards.

This is only part of the story. The moderate rate of inflation that was in evidence early this year was largely due to temporarily steady or falling food prices (chiefly meats), which make up almost 25% of the consumer price index. The service sector continued to show price increases much greater than the overall index. Prices for gasoline, clothing, houses and furniture continued to rise. Used car prices rose sharply. The August-October decline in the inflation rate can be attributed partly to the bumper crop of agricultural products this fall, which accounted for a zero change in food prices in September and only a 0.3% increase in October. But this pattern also reflected the slowdown in the economy in these two months which, according to our forecast as well as most others, will not persist for long.

Even with the slowdown, service prices continued their inexorable rise at a 6% annual rate (seasonally adjusted) in September and October, and commodities other than food were not far behind. In summary, the inflationary base for the current recovery is about twice that of the 1970 recession and nearly five to six times as high as those of the earlier postwar recession.

We stated earlier that the basic character of the inflationary process is different from those of the past. The structure of our economy has changed over the past several decades as corporations and unions have grown and acquired organized power. Moreover, the informal social constraints on the economic behavior of persons have broken down; farmers, manual laborers, immigrants, blacks, women, even school teachers and other social service workers are no longer content to accept an inferior economic status, and are demanding improvements in their relative economic positions. The net result is powerful resistance to wage decreases when economic activity is soft and a massive upward pressure for wages and salary increases whenever business conditions permit. Once a wage-price spiral is started, it is extremely difficult to

stop, or even to prevent further escalation. Such a spiral is now embedded in our economic system, so that even while the economy is still far below its full employment level, we still have an inflation rate in the 6% range.

Looking ahead to 1977, it is our reluctant conclusion that the inflation rate will creep upward again—for a number of reasons—to a figure on the order of magnitude of 7% by the end of the year.

(1) As the recovery from the recession continues, the gains from labor productivity, which so far have enabled producers to pay higher wages without corresponding price increases, will diminish. This is typical productivity behavior in a recovery.

(2) Also, as the recovery progresses, the capacity utilization rate will rise, which means putting into production less efficient (more costly) facilities, and a temptation to raise prices autonomously as competitive pressures subside.

(3) Bottlenecks may occur in a few basic raw material industries, the result of an inadequate level of capital investment in such facilities during the past several years. This effect is especially likely in industries that have been most affected by environmental controls, where a substantial percentage of available investment dollars must be spent for pollution control in plant and equipment, rather than for net expansion of capacity.

(4) Further price increases of import prices are to be expected. These include not only oil, but other raw materials as other producer cartels are created. The rapidly developing shortage of natural gas in the United States will both boost domestic prices and require increased imports of liquefied natural gas, which is very expensive.

(5) In recent months, wholesale prices other than agricultural prices have been rising at rates far higher than consumer prices. Even allowing for the fact that wholesale prices are often list prices and do not adequately measure

actual selling prices, these increases bode ill for the future.

(6) It is true that, in theory, these inflationary pressures could be held in check by monetary and fiscal policies, but these do not seem to be in the political cards. Although we expect the Federal Reserve to follow a cautious policy and to hold the inflation escalation to a minimum, we do not believe that they will risk choking off the recovery by a tight policy. Further, as noted earlier, although a tax cut or other tax action early next year will not induce demand-pull inflation, it will lessen the constraint of sluggish economic growth and high unemployment on the built-in chronic inflationary process.

A gradual rise in the inflation rate, if it is in fact moderate and gradual, should not of itself lead to boom and bust. What is crucial to business decisions to invest and consumer decisions to buy is not the absolute level of the inflation rate, but the degree of escalation in the inflation rate. If the inflation rate can be held reasonably steady, even at 6 or 7%, wages and salaries tend to rise at about the same rate, often via escalator clauses in wage contracts; market rates of interest tend to include an element for loss of purchasing power due to inflation; corporate profits in due course should reflect the inflation; Social Security and civil service retirement benefits can be tied to the Consumer Price Index as they already are; and most (though not all) incomes can be protected against steady inflation. What causes trouble, however, is an abrupt *shift* in the inflation rate. The sudden onset of double-digit inflation in 1974 wreaked havoc. Such a development would wreak havoc again.

It is therefore our projection that, even with the moderate escalation in the inflation rate that we project, the recovery will continue through 1977 and beyond. But, to repeat, it will be a recovery that falls short of full employment levels.

The Outlook for Interest Rates. Both short- and long-term interest rates have so far remained at levels lower than most forecasters were predicting for this stage of the current recovery. But long-term rates are somewhat higher than should be expected with the current slowing down of the economy. It is generally conceded that long-term rates fluctuate directly with the expected level of inflation, and that these inflationary expectations are largely determined by current and recent rates of inflation.

Historically, *real* rates of interest on long-term assets have generally been about 2½% to 3%. If this historical yardstick is applied to current interest rates, a 6% inflation with a 2½% real return adds up to a long-term money rate of interest of about 8½%. However, if the rate of inflation accelerates in 1977 as we expect it to, then long-term rates should move up along with the higher inflation rate.

Short-term interest rates have been lower than expected, even with the current slowdown. We think this can be attributed to four major factors, of which three have received major recognition. First, the current slowdown of the Consumer Price Index has led to short-term expectations of lower anticipated rates of inflation, and this has helped bring short rates down. Second, the decline in demand for commercial bank credit by nonfinancial firms has kept short rates below what they would be in a normal recovery period. Third, the Federal Reserve has given indications from the minutes of its last Open Market Committee meeting that it is holding short rates down to add some stimulus to the economy.

However, a final influence has not received much attention. We believe that a good part of the explanation lies in the increased magnitude of foreign investments in the United States. The New York-based Conference Board has stated that direct foreign investments in the United States in the first half of 1976 were about 60% higher than they were in the first half of 1975.

Department of Commerce figures indicate capital inflows of about \$7 billion in the second quarter, up from \$4.75 billion in the first quarter. These figures exclude flows from direct investment, but support the view that money and capital flows from overseas are helping keep interest rates down. This influx of foreign funds has helped to keep both money market and capital market rates of interest lower than they would have been as the result of only domestic influences.

On balance, therefore, we expect long-term rates to drift gently upward as the current respite from escalating inflation comes to an end. On the other hand, we expect short-term rates to remain low, perhaps go even lower, until the Federal Reserve is satisfied that the recovery has regained its momentum. At that time, a slow and gradual rise in short-term rates may well be permitted or even induced.

**GOVERNMENT
PURCHASES OF
GOODS & SERVICES**



Federal. Two events are especially relevant in forecasting federal government purchases of goods and services (GPGS). One, of course, is the change on January 20, 1977, from a Republican to a Democratic president, thus putting control of both the Congress and the Executive in the hands of the same political party. The second is the increasing role of the congressional budget committees, created by the Congressional Budget and Impoundment Act of 1974 (discussed in some detail in our Outlook Edition of the *IBR* a year ago).

Much to the surprise of some political cynics, the congressional budget committees during the recently concluded congressional session—the first session in which the committees were fully staffed and operative—were

highly effective in controlling the over-all proportions of the FY 1977 budget. The committees' decisions are incorporated in a concurrent (House and Senate) bill which is acted upon by the Congress as a whole. When enacted, it becomes binding on all congressional committees unless the concurrent resolution itself is amended. The Second Concurrent Resolution (which differed only slightly from the first) called for a ceiling on total outlays (GPGS plus transfers of various kinds) of \$413.1 billion. Actual congressional action called for budget authority which would result in estimated outlays of \$410.7 billion (including continuing resolution authority for a few minor programs for which appropriation bills were not enacted by the end of the session plus mandatory items requiring further appropriation action).

The \$2.4 billion remainder is available for expenditures from supplemental appropriations or for expenditures above the levels permitted by the continuing resolutions when they are superseded by appropriations. Further, the second current resolution did not differ greatly from the President's estimate as of the mid-session budget review. The \$413.1 billion total was \$12.3 billion higher than the President's estimate of total outlays of \$400.8 billion. Thus, unless the budget is amended, the total outlays will run only 3% above the President's estimate.

President-elect Carter's influence on the budget is harder to determine. However, two conclusions can probably be drawn. *First*, on the expenditure side, any change in policies by the new president cannot significantly affect actual outlays until late in 1977 at the earliest. Some speed-ups of programs can be generated within existing appropriations. Further, actual spending in the first three quarters of 1976 was \$11.4 billion below the President's estimates. Undoubtedly part of this short-fall in expenditures will be made up. According to informal comments by government officials, these short-

falls were created by a combination of erroneous original budget estimates, interest rates lower than anticipated, and tardy contract placements, especially in the Department of Defense. But the make-up effects on GPGS will not be large because some of the short-falls were in transfer payments, and some were expenditures from one-year appropriations which died on September 30.

Second, unless the so-called lull in the economy comes to an end by early next year, new tax legislation to stimulate the economy is probable. Such legislation can be enacted fairly quickly, even made retroactive. And the lag between tax cuts or rebates and consumer spending is not long, especially if the tax relief is directed toward low- and middle-income taxpayers, as it probably will be. The effects of such relief, of course, will show up in personal consumption expenditures, not GPGS.

On balance, we expect federal government spending in 1977 to grow less rapidly than total GNP, but to provide significantly more economic stimulus than it has in 1976 when spending, measured in constant dollars, was almost flat. In current dollars, we expect federal government purchases of goods and services in FY 1977 to total \$143.2 billion, on a national income accounts basis, as compared with an estimated \$140.6 billion implied by the Second Concurrent Resolution. The increase is attributable to the make-up of spending short-falls in the first three quarters of calendar 1976, plus perhaps some slight speed-up of existing programs after Carter becomes president. This figure compares with \$131.3 billion in the preceding year, an increase of 9%.

The estimate shown in the total forecast table for the fourth quarter of calendar 1977 (the first quarter of fiscal 1978) is a sheer guess. No information for a more refined estimate will be available until after President-elect Carter assumes office and makes his programs known.

Although it is not relevant to our forecast, at least a brief mention of the Tax Reform Act

Forecasted Gross National Product by Sector

(billions of dollars except where noted; quarterly data at seasonally adjusted annual rates)

	1976		1977			
	3rd Q*	4th Q	1st Q	2nd Q	3rd Q	4th Q
Government purchases of goods and services	369.6	379.0	387.0	396.5	406.5	416.5
Federal	134.5	139.0	142.0	144.5	147.5	150.5
Defense	88.5	93.0	95.0	96.5	98.0	100.0
Other	46.0	46.0	47.0	48.0	49.5	50.5
State and local	235.0	240.0	245.0	252.0	259.0	266.0
Gross private domestic investment	247.0	252.4	263.2	274.3	286.6	297.8
Business fixed investment	163.0	167.8	173.2	178.9	184.7	190.7
Residential structures	68.9	71.8	75.0	78.4	81.9	85.6
Inventory investment	15.1	12.8	15.0	17.0	20.0	21.5
Net exports	3.4	5.8	6.5	6.4	6.0	6.5
Personal consumption expenditures	1,088.5	1,109.6	1,133.6	1,170.4	1,210.3	1,252.1
PCE-automobiles	71.7	73.2	75.6	78.4	79.3	82.1
PCE-other	1,016.8	1,036.4	1,058.0	1,092.0	1,131.0	1,170.0
Gross national product	1,708.4	1,746.8	1,790.3	1,847.6	1,909.4	1,972.9
GNP deflator (1972 = 100)	134.34	136.11	137.96	140.03	142.30	144.79
Annual rate of change (%)	4.4	5.1	5.4	6.0	6.5	7.0
GNP in 1972 dollars	1,271.7	1,283.4	1,297.7	1,319.4	1,341.8	1,362.6
Annual rate of change (%)	3.8	3.8	4.4	6.7	6.8	6.0
Personal income	1,386.0	1,421.9	1,454.6	1,501.3	1,564.3	1,609.2
Unemployment rate (% of civilian labor force)	7.8	7.9	7.7	7.1	6.6	6.4

*Actual data as reported by Department of Commerce, November 18, 1976.

of 1976 should be made. This act, the most comprehensive piece of tax legislation in thirty years, will affect nearly all taxpayers. However, the innumerable detailed changes in the Internal Revenue Code made by that act, plus minor changes made in other tax legislation, yielded an estimate of revenue about exactly equal to the Second Concurrent Resolution target figure: \$362,488 million for the former and \$362,500 million for the latter. Thus, the tax committees of the Congress abided by the decisions of the Congressional Budget Committees as well as the appropriations committees.

State and local. State and local government spending, measured in constant dollars, was also almost flat in 1976. Spending actually declined from IV Quarter 1975 to II Quarter 1976. The reason lies largely in the delayed effects of the 1974-75 recession on revenues, or on revenues as anticipated by legislative bodies when appropriations were enacted early in 1975 and, to a lesser extent, in early 1976. Another cause has no doubt been the continuing effects of the financial crisis in New York City and similar, though lesser, difficulties in other cities. As a consequence, many state and local projects were delayed, and pay increases of employees

failed to keep up, or barely kept up, with increases in the cost of living. On the other hand, the extension of the federal revenue sharing program will bolster state and local government finances.

As the recovery progresses, we foresee a resumed rise in state and local government GPGS at a rate roughly equal to, but again somewhat below, the rate of growth in total GNP, in both constant and current dollar terms. Rising tax revenues will permit such an increase, but we expect state and local governments to continue conservative financial policies, though not as conservative as in the past year.

In combination, federal plus state and local spending for goods and services has been a drag—minor, but nonetheless a drag—on economic expansion in 1976. As we foresee it, in 1977 such spending will cease to be a significant drag, but will not become a source of stimulus. Such stimulation must come from the tax side of the budget and from the private sector of the economy.

BUSINESS FIXED INVESTMENT



As mentioned earlier, business fixed investment so far has not played its role in the process of economic expansion. The failure of business fixed investment to carry the momentum of the recovery in 1976 can be attributed to two major factors, one financial and the other political. Both financial and nonfinancial firms found themselves in extremely illiquid positions in the 1974-75 recession, and the last year and a half can be characterized as an interval of liquidity building by all economic agents, firms and households alike. Everyone has turned conservative; nonfinancial firms are more reluctant to borrow from external sources and

financial firms are continuing to pursue cautious lending policies to improve their balance sheets, which had deteriorated as a result of loan losses in 1974-75. As a result, aggregate demand for short-term credit has declined. Short-term credit demands of nonfinancial firms declined by more than \$10 billion in 1975, with a further decline of about \$8 billion expected for 1976. The current lag in capital spending is at least partially due to bad memories of the 1974-75 experience.

Uncertainty regarding the nature of the economic policy that will emerge from the Carter Administration has also played a role in delaying outlays for business fixed investment. The behavior of the stock market since the election is further evidence of such uncertainty and concern, and until the economic policies are more clearly spelled out there will be a natural tendency to postpone capital expansion plans. In recent weeks, President-elect Carter has gone out of his way to emphasize that he is not antibusiness, and has stressed the need to increase investment spending. Though general and of necessity unaccompanied by specific programs, these statements are encouraging.

Recent evidence indicates that plant and equipment outlays will rise moderately throughout 1977. The annual McGraw-Hill fall survey, conducted in November of 1976, indicated that U.S. firms intend to spend 13% more on plant and equipment in 1977 than they did in 1976. This amount, adjusted for an anticipated 7% price increase in business fixed investment, indicates a 6% real increase in these outlays. While hardly evidence of a remarkable recovery in capital spending, it is a significant improvement over the real gain of only 1% in 1976.

Another good sign for a pickup of business fixed investment is the surge of activity in the machine tool sector. The magnitude of economic activity in machine tools is small compared to overall plant and equipment spending,

but new orders for toolmakers have historically been a good indicator of optimistic expectations in the investment sector. Tool orders have moved up sharply since July of 1976, and backlogs of unfilled tool orders have also increased significantly since that time. Most orders so far are the result of replacement demand, but, as industrial capacity rises toward 85% or so, expansion demand should show significant increases.

RESIDENTIAL CONSTRUCTION



The pause in the economic recovery that took place in the last half of 1976 was due partially to the failure of the residential housing sector to perform its usual countercyclical role. Housing has led the economic upturn in all of the postwar business cycles except the current one. The level of single-family dwelling unit starts has moved up substantially from its previous low, but the privately financed multifamily market is still in a slump; therefore, the entire housing market is recovering only gradually.

Housing starts increased sharply in September 1976, when they jumped to 1.81 million units (at a seasonally adjusted annual rate) from the previous month's level of 1.54 million. A careful examination of this increase indicates no basic improvement in unsubsidized housing; instead, the rise resulted when a large backlog (145,000 units) of HUD's Section 8 program was translated into starts. However, the private multifamily housing market began to show some sign of strength in October. Although total starts were down 4% from September levels, the level of private starts was up slightly over the previous month. Both single-family and multifamily private starts were on the increase, and residential construction was 25%

higher in October of 1976 than it was a year ago.

Mobile home shipments were also showing improvement, with shipments in October running at a seasonally adjusted rate of 277,000 units, about 20% higher than they were a year earlier.

Despite the encouraging news from the housing sector, it is not expected that the market will rebound to its 1973 peak of 2.4 million starts and 600,000 mobile home shipments. In late 1976, about 350,000 homes were still unsold, representing a seven-month supply of housing at year-end sales rates. This inventory of unsold housing is below what it was a year ago, but it is still high by historical standards.

Two types of housing inventory currently exist. One consists of a stale inventory of housing that has been on the market for some time; the other consists of new housing units that have been moving rapidly. Furthermore, there are pronounced geographical differences. Demand exceeds housing available in California, and housing inventories exceed demand in Colorado, Arizona and Florida.

Despite historically high inventories and vacancy rates, the price of new housing continues to rise faster than the general price level. At year end, the median price of new homes was about \$45,000 and the average price of a new house was slightly above \$50,000. Prices for new homes are about 15% higher than they were a year ago.

Single-family housing will continue to improve modestly throughout 1977, but multifamily units will continue to be sluggish. The rental vacancy rate on apartment units is down to 5.7%, compared to 6.2% a year ago. The rental market will need to tighten even further, with higher rents necessary to make the return on rental housing investment sufficiently attractive to induce new apartment construction. Apartment mortgage lenders are still smarting

from the huge financial losses they took during the last recession, and apartment house financing still has unusually high premiums tacked on to basic mortgage rates.

The improvement in housing starts will continue throughout 1977, although regional disparities in growth patterns will continue. The tendency for the western part of the United States to experience a higher growth rate than the east will continue, as interregional migration continues westward. Housing activity will continue to remain flat in the Northeastern part of the United States and in parts of the South, especially in Florida. California and Texas should have significantly increased housing activity in the year ahead. For the United States as a whole, housing starts will move up about 10% to about 1.7 million units during 1977. While this level of activity cannot be considered a sharp rebound of the housing sector, it is a significant improvement over the 1.55 million starts that are currently estimated for 1976.

INVENTORIES



Heavy inventory liquidation throughout 1975, especially in the first half of the year, resulted in an end-of-year inventory-sales ratio only slightly above the ratio businessmen reported as desirable. When sales continued to rise in 1976, a switch to inventory accumulation was indicated. The shift in business (excluding farm) inventories from a \$9.5 billion liquidation in fourth quarter 1975 to a \$12.7 billion accumulation in first quarter 1976—a net swing of over \$22 billion (all annual rates)—was the prime cause of the jump in the growth rate of real GNP to an impressive 9.2% annual rate. Most of this sudden accumulation was in soft goods, with a hard goods build-up expected to follow.

Because the growth rate of real final sales

averaged about 4% for the first three quarters of this year and is not expected to accelerate until 1977, further jumps in inventory investment did not occur. Second-quarter accumulation increased slightly to an annual rate of \$16 billion, but the simultaneous slowdown in real GNP growth to 4.5% left businessmen with a higher ratio of stocks to final sales. Continued sluggish third-quarter growth resulted in a small cutback in inventory investment, and a further cutback appears likely in the fourth quarter as real GNP growth wavers at less than 4%.

Although the economic pause will continue into early 1977, no inventory liquidation will occur. Indeed, inventory accumulation may rise slightly in the first quarter in anticipation of the lift to retail sales to be provided by tax incentives to consumers. Because inventory accumulation over the past six months has been modest, the inventory-sales ratio is not excessive. The faster growth in final sales expected in the second and third quarters of 1977 will result in a higher rate of inventory investment, with the heaviest increases taking place in the durable goods and capital goods sectors. Farm inventories will increase moderately, now that most grain shipments to the USSR are complete. By the fourth quarter of 1977, the annual rate of inventory investment will be approximately \$21.5 billion, a rate which is not excessive so long as retail sales continue to rise.

NET EXPORTS



The speed of recovery of the major industrial nations varies considerably by country, with the upturn in West Germany paralleling the U.S. growth path. Japan is not far behind. The turnaround in Canada and in France has lagged our domestic growth, and the United Kingdom and Italy continue to be beset with economic

woes; inflation rates in both countries are running at about 16%.

The general pattern of growth in the major industrial economies has been fairly similar to the U.S. experience. The pause in the recovery that the United States experienced in the latter part of 1976 was reflected in the growth pattern of our major industrial trading partners. Real growth rates for the major European economies have been scaled down in recent months, partly due to the fact that business fixed investment has not followed the pickup in consumer demand and inventory building in any of them. West Germany has been the European leader in the recovery, with strong pressure to revalue the mark upward. The latter is not due to the fact that the West German economy is so strong, but rather because its neighbors (France, Italy and England) are doing so poorly. Factories in West Germany are operating at only about 80% of capacity.

It is important to recognize that the world's major industrial economies are in large measure linked to one another. One country's imports are another country's exports, and foreign trade linkages bind the industrial world together. As 1976 draws to a close, the pattern of world trade and activity will depend largely on the economic policies pursued by the United States, West Germany and, to some extent, Japan. The smaller industrial economies are looking to these three countries for leadership, since most of them depend much more on foreign trade for domestic prosperity than we do.

If the U.S. economy continues to recover throughout the coming year, as we expect it will, then the recovery in world trade will gather momentum. For some industrial countries, particularly Great Britain and Italy, high inflationary pressures will continue to erode the competitive positions of their exports and worsen their trade positions.

The U.S. trade balance has been running in the red for consumer goods, as spending surges

for foreign produced automobiles, television sets and CB radio equipment. These deficits are being offset by a trade surplus in the capital goods sector, particularly for high technology items, including aircraft. As the world economic picture continues to improve, capital goods orders will continue to rise. In addition, our traditionally strong world trade position in agriculture, particularly feed grains, will insure a net export surplus throughout 1977.

The major cloud on the horizon is the prospect of a significant increase in petroleum prices by OPEC. A wide range of estimates for higher oil prices has been circulated, running from 5% to 25%. It seems most reasonable that the OPEC cartel will settle on an oil price increase of about 10%, and that may be delayed. Members of OPEC who are currently running balance of payments deficits (for example, Venezuela and Iran) are pushing for higher prices, while the Saudis are expected to be more moderate in their price demands.

This is not all a one-sided effect on our trade balance, since the OPEC nations are major importers of our capital goods. Higher foreign exchange earnings by OPEC will mean more exports for us. In view of this, any moderate settlement on the price of oil will have a minimal disruptive effect on our overall trade balance, but will be disruptive to European economies and even more harmful to the Third World nations.

PERSONAL CONSUMPTION EXPENDITURES



Automobiles. A month ago, the future for automobile sales was rosy; it has since become quite cloudy. Part of this cloudiness has been caused by the Ford strike. The fact that Ford showrooms have not been filled with a large selection of new models may have taken away

some of the enthusiasm for the 1977 cars and encouraged an attitude of "Let's wait until all the models are available." Although it looked touchy for a day or so, it now appears that the rest of the industry will settle without a major strike. There may be a few local strikes at some GM plants, but they should have little or no effect on the supply of new cars.

There are also some clouds caused by customer expectations concerning the economy and their own economic well-being within that economy. As a result, automobile sales have not taken off as expected, particularly for small cars. For the month of October, the rate of U.S. new car sales increased by only 1.5% over a rather weak 1975 level. Even more surprisingly, new car sales for the first twenty days of November actually fell slightly from unimpressive year ago levels. Interpretations as to the reason for this sudden sluggishness include the Ford strike, consumer reaction to the price increase of the 1970s and reaction to the general economy.

In general, we still expect 1977 to be a relatively strong automobile year with new car sales at about the 11 million level. There are a number of reasons for this forecast despite the current sluggishness:

(1) There is a high level of pent-up demand. Many of the factors that have caused the weak sales during the past two and one-half years have disappeared or at least are reduced in intensity.

(2) The 1977 models provide the consumer with the most significant choice of models and styles ever offered.

(3) Early indications tell us that the new GM full-sized cars are being well-received. This trend, if it continues, could stimulate the entire industry.

(4) Our general projection for the economy is generally optimistic. A tax stimulus early next year would contribute to the strength in the demand for autos, perhaps more than for other consumer goods.

(5) An ample supply of automobile credit will be available from all lending sources.

(6) We expect the industry to put forth extra effort to market new cars. GM has a new line of cars and will be pushing hard; Ford, Chrysler and AMC will counter in order to maintain their market share; and auto importers want to keep or increase their market share.

(7) The used car market is exceptionally strong and we expect it to remain so. Strength in this sector improves the economics of trading for a new car.

Probably the biggest question that remains is the outlook for the small-car market. If gasoline prices rise significantly after the first of the year, consumer interest in smaller cars could once again become strong. Increased price promotion efforts via rebates on small cars will strengthen sales should demand remain sluggish.

Spending (excluding automobiles). Consumer spending normally accounts for nearly two-thirds of GNP. Excluding automobiles (discussed separately), it accounts for about 60% of GNP, and is thus by far the largest single component of total spending and output. Despite this fact, this component is almost invariably the last to be analyzed. The reason is that it is normally the least volatile component of GNP and, more important, is in substantial degree a function of the income generated by the other more volatile components of total spending. That is, in large part it is a dependent variable in GNP models.

Nevertheless, consumer spending can also be an independent element in total spending. Consumers occasionally misbehave. They can spend an unusually large or small percentage of their disposable (after-tax) incomes. The usual forecasting technique is, therefore, to estimate values for all of the more autonomous components of GNP, calculate what consumer spending would be if they responded to changes in income from variations in these more auto-

nomous components in a normal fashion, including the income generated from consumer spending itself, and then try to "psych out" consumer behavior. Will they, in the aggregate, be in a spending mood and willing to take on consumer debt, or will they tighten their belts and save an unusually large percentage of their incomes either by salting away money in savings accounts or by reducing their indebtedness?

Two other imponderables complicate the forecast of consumer spending in 1977. The first is the possibility, perhaps probability, of a tax cut or rebate to stimulate the economy. As noted earlier, we are predicating our forecast on the assumption of some tax action. Such action would stimulate consumer spending, after a brief lag, and the stimulus would persist for four to six months or more.

In the meantime, the increased consumer spending would, by generating higher incomes in consumer goods and services industries, stimulate further consumer spending (the "multiplier effect"), thus lifting the *level* of total spending by several times the amount of the tax action. But the rate of rise in consumer spending would taper off after a time, unless other nonconsumption types of spending rise to maintain the momentum.

The other imponderable is a probable drop in transfer payments, notably unemployment compensation, if the rise in GNP stimulated by the tax action reduces the unemployment rate. We estimate, however, that the unemployment rate will decline only modestly, at least until late in the year, so that a decline in unemployment compensation will not significantly offset the tax action stimulus, again at least until late in the year.

Taking all of these considerations into account, we estimate that consumer spending will continue to be sluggish into the early part of 1977, but then will rise substantially in the second and third quarters (assuming tax action by March). Indeed, consumers may loosen their purse strings before the tax legislation becomes

law, if enactment seems virtually certain. Even so, we do not expect any boom in consumer spending. Consumers, aware of the upward creep in consumer prices, especially for services, and the continued high, though declining, level of unemployment, will continue to be cautious. On balance, we expect total consumer spending to rise by a slightly lesser rate than GNP as a whole, as indicated in the forecast table.

A QUALIFYING FOOTNOTE

All forecasting must be based on numerous assumptions, explicit or implicit, as to exogenous variables that are beyond the competence of the economist to foresee. The situation is especially treacherous at this time with a change of political administrations in Washington, continued uneasiness in the minds of both businessmen and consumers regarding the economic and political future, a possible boost in oil prices and the ever present threat of military aggression. Added to the above is the possibility that inflation may escalate out of hand, and thus bring the recovery to an abrupt halt. Or conversely, wage and price controls might be enacted with their eventual disruptive influences.

But if the recovery can be sustained long enough with only minor escalation of inflation, capital spending by business may trigger a process that economists call the "accelerator principle"; capital spending generates consumer income which in turn creates the need for additional capital, and a self-reinforcing boom is underway. We do not foresee such a development in 1977, but it could happen.

We therefore present this forecast with due humility. We have made what seemed to us reasonable estimates of the exogenous forces that may determine the outlook. Collectively, we have done the best we can to project the economic environment in 1977, but we make no claim to omniscience. We can only hope that we have not missed the mark too far.



The Indiana Economy

Introduction by Morton J. Marcus, Research Economist, Division of Research

The preceding forecast for the nation suggests a good year for the state if the forecasted increases in consumer and producer durables materialize.

The economic recovery to date has not brought Indiana to pre-recession levels of employment or real personal income. But accelerated economic growth in 1977, particularly in key industries, may raise both employment and real incomes to new highs. With a resurgent recovery, nominal personal income could reach an annual rate of \$39.6 billion by the last quarter of 1977, an increase of 21% over the level of the second quarter of this year. The effects of a harsh winter and recently announced steel price increases could dampen this prospect.

INDIANAPOLIS

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A review of employment in Indianapolis since November 1973 reveals ups and downs reflecting state and national trends (see figure and Table 1). During the recession brought on by the OPEC reduction in oil supplies, Indianapolis employment continued to increase more than in the state and nation. The contraction resulting from the 1974-75 demand-induced recession was more severe in Indianapolis than in the United States, but less severe than in Indiana. The city's recovery has not been strong. Both Indianapolis and Indiana are employing fewer in September 1976 than in November 1973; the nation is employing slightly more. Although manufacturing employment contracted as much in Indianapolis as in the United States, U.S. manufacturing employment has recovered more strongly.

Even so, the Indianapolis unemployment rate during 1976 has been significantly below the U.S. rate. But an examination of labor force data by household indicates that during the recovery phase (March 1975-September 1976), the U.S. work force increased 3.9% while the Indianapolis work force *decreased* 1.4%. If the Indianapolis work force had increased at the U.S. rate, the Indianapolis unemployment rate would be much higher.

One explanation for the decrease in the Indianapolis work force is that net outmigration has occurred; between 1970 and 1975, 15,000 persons left the Indianapolis metropolitan area. It is doubtful that this trend changed course in 1976. Another possible explanation is that some unemployed persons have become discouraged and are not now seeking work.

Indianapolis competes with three other metropolitan areas—Cincinnati, Columbus and Louisville. Of the four, Cincinnati enjoys the strongest relative position; in this area, manufacturing has contracted least, and the strongest recovery has been made in total nonagricultural employment (see Table 2). The contraction in manufacturing was more severe in Indianapolis than in Cincinnati, but even more severe in Columbus and Louisville. The recovery in manufacturing in Indianapolis has been similar

to the recovery in Cincinnati and Columbus; nevertheless, of the four areas, the recovery in total nonagricultural employment has been slowest in Indianapolis. It appears that the nonmanufacturing sector is a source of weakness. Components of the sector that have contracted during the recovery are construction, finance, insurance and real estate, and services.

Other measures of economic activity are summarized in the Indianapolis Business Activity Index, prepared by Indiana National Bank. The index reached 228.7 in September—the highest level achieved this year. The industrial component showed the most strength in the chemical and transportation equipment sectors. Electric energy sales in the third quarter of 1976 in Marion County showed a modest increase in industrial sales and a stronger increase in commercial sales compared to the same period a year ago.

The report on construction in Marion County shows essentially no change in the number of single-family housing starts but an increase in multifamily starts in the third quarter of 1976 compared to the third quarter of 1975. New construction (apartments; commercial, industrial, office, and public buildings; and ware-

TABLE 1
Nonagricultural Employment
(November 1973 = 100)

	Peak, Sept. 1974	Trough, March 1975	Sept. 1976
Indianapolis	102.2	95.4	97.2
Indiana	100.9	92.1	97.5
United States	100.6	96.2	101.4

houses) for the third quarter of 1976 was \$37 million as compared with \$51 million completed. Therefore, for every dollar on new construction roughly \$1.50 in construction was completed. The value of new construction for the third quarter was 28% above the second quarter, but for the January-September 1976 period was 52% below the same period in 1975. In September, construction employment was about 15% below the level of last year. The city is submitting seven projects to the federal government for funding under the Public Works Act of 1976. This act is designed to stimulate employment in the construction industry; the projects range from a new central firehouse to renovation of Bush Stadium.

National Trends in Industrial Production

U.S. Industrial
Production

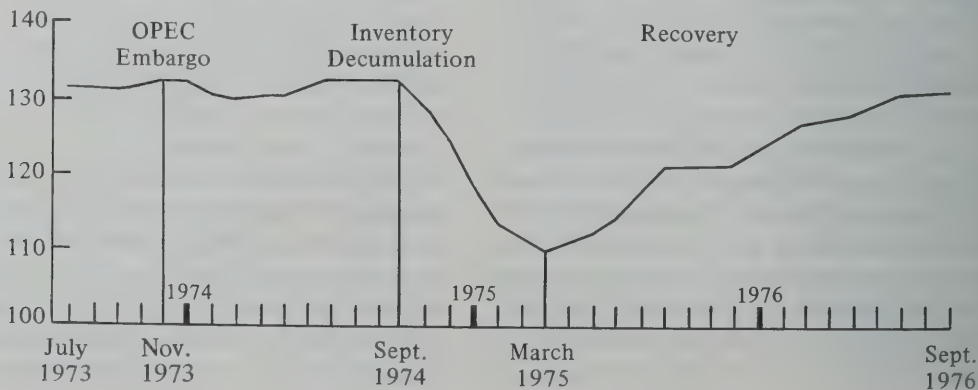


TABLE 2

Employment in Four Cities
(November 1973 = 100)

	<i>Peak, Sept. 1974</i>	<i>Trough, March 1975</i>	<i>Sept. 1976</i>
<i>Total nonagricultural</i>			
Indianapolis	102.2	94.5	97.2
Cincinnati	101.5	96.0	100.8
Columbus	99.9	95.2	98.0
Louisville	101.5	94.2	97.3
<i>Manufacturing</i>			
Indianapolis	99.8	88.3	91.4
Cincinnati	99.8	89.8	93.1
Columbus	99.3	85.1	88.4
Louisville	102.8	89.7	92.2

Since July, total loan demand for Indianapolis has increased somewhat. The primary contributors to the improvement have been the consumer and real estate loan categories. Department store sales during the first six months of 1976 were 12% higher than during the same period last year. A representative of the industry has reported a continuation of this trend in Central Indiana.

In industrial park news Phillips-Van Huesen (the shirt manufacturer) has moved the national headquarters of two of its divisions to Park 100 in northwestern Indianapolis, and occupied 102,000 square feet of warehouse space. This move is evidence of the appeal of Indianapolis as a distribution center. Eli Lilly will complete soon the first phase of a ten-year, \$150 million expansion program. Since this phase replaces existing production facilities, no net increase in employment is expected.

The skyline of downtown Indianapolis is being altered by the Merchants Plaza Project, which includes a 527-room hotel scheduled for opening on April 1. The hotel is enjoying a strong presale of rooms for conventions. In addition to the hotel, Merchants National Bank will occupy 225,000 square feet of office space; nearly half of the 375,000 square feet available

for office space is committed; and 85,000 square feet is being leased for retailing.

What about the future? As for construction, no new large projects are on the horizon. With declining vacancy rates in multifamily units, there is the possibility of upward pressure on rents and higher rates of return; an increase in multifamily housing starts is a possibility next summer. Conversations with a cross-section of major employers indicate that a few may have modest increases in employment based on expected sales increases, and economic activity may quicken at some locations in the metropolitan area which have been made more accessible by the opening of the inner belt.

FORT WAYNE

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All major categories of economic activity in the Fort Wayne SMSA have experienced steady growth throughout the first three quarters of 1976. Manufacturing and nonmanufacturing employment have increased by approximately 2,400 and 3,000 jobs, respectively, as of the end of August. Unemployment has decreased 2.8 percentage points, to a seasonally adjusted current level of 5.0% in October. However, the local unemployment rate is deceptive in that the decrease in unemployment has resulted from a continued contraction of the labor force, now approximating 8,000, rather than an expansion of employment.

Local department store sales so far this year are up 15% on a real basis from the anemic first quarter 1975 low, although they have been flat for the last six months through August 1976. This mirrors the national trend; however, the local consumer is still actively purchasing,

especially durables. For example, building permits for new single-family and duplex housing in Allen County are averaging 115 per month through September, which is 36% ahead of last year and 15% ahead of 1972, the best year to date. This bodes well for local construction activity in the short run, especially since the two most recent months have been trending further upward. Local new housing data are consistent with both a *Federal Reserve Bank of St. Louis Review* article which suggests that the housing industry will peak later in this recovery than it has in past recoveries, and with housing starts nationally, which jumped 10% from the second to the third quarter. This activity should keep the local wire and motor industries strong.

Consumers largely supported the current economic recovery through 1975, and the buildup of business inventories supported the push in the first two quarters of 1976. If the economy is to continue to expand, the need for increased capital spending by business is self-evident. New orders for durable goods have recouped from the April 1975 low, but more growth is needed. Given the still relatively favorable interest rates (especially when considering the inflation rate), the evidence suggests further increases in capital spending during the current expansionary period.

The transportation equipment sales trend is of particular importance to the Fort Wayne economy. Truck sales as of the end of September had pulled ahead of the record pace set in 1973; however, sales have been concentrated in the lower weight classes. This favors local manufacturers, especially Dana Corp., which manufactures primarily for those weight classes. However, the heavy duty truck market has been flat in 1976. Increased capital spending should benefit this particular segment of the truck industry, and this in turn will benefit the Fort Wayne economy. Also, the new Teamsters contract, which calls for having air conditioning on line haul equipment by April 1, 1977, should create a blip in the demand for the large

heavy duty trucks produced in Fort Wayne, just as the Department of Transportation's new brake standards did.

The current business recovery has labored of late; however, it should become expansionary again during the first quarter of 1977. Local employment is forecasted to expand by 3,000 (2%) and 2,000 (1.3%) jobs in the first and second half of 1977, respectively.

One event which would invalidate this forecast should be considered. If there is an excessive increase in the price of crude oil in January 1977, the current economic expansion could easily abort, and severe local unemployment would reoccur as a result of an oil boycott.

RICHMOND

WILLIAM C. PAVORD

*Associate Professor of Business
Indiana University East*



The Richmond area economy continues a gradual recovery from the recent recession. Potential for further expansion of business activity exists, and businessmen are cautiously optimistic that the growth will continue through the first part of next year.

The most encouraging sign is that unemployment has dropped to 5.6% in September 1976, from 12.6% a year ago, as 1,900 workers have been added to payrolls. This increase includes some new hiring after all laid-off personnel had been called back. Other positive factors indicating a broad-based recovery are increases in deposits in financial institutions, higher electricity usage, and steady monthly increases in retail sales. For nine months of 1976, the level of month-end bank deposits was up 8.5% over 1975. Similarly, month-end savings and loan deposits are up 9.2%. Kilowatt

hours of electricity consumed rose a modest 3.0% over the nine-month period in 1975. No data is available for retail sales; however, retailers in five shopping centers report moderately higher sales volumes each month. Construction remains a soft spot in the economic recovery. Nine-month dollar value of permits issued for construction is 4.1% below the 1975 level.

Future economic activity will be strengthened by a major new industrial plant to be established in Richmond. American Motors will eventually employ over 1,000 workers manufacturing four-cylinder metric engines. Full operation will begin in January 1979. Additional strength for future economic activity will come from major expansions of firms presently located in the Richmond area. Nearly 300 workers will eventually be added to payrolls by expansion at Johns-Manville, Perfect Circle Division of the Dana Corporation, Hoffco/Comet, and Champion Target Company, a division of Federal Cartridge Corporation.

New companies may be attracted to the area by the availability of presently unused plant facilities. About 700,000 square feet of floor space is available in a variety of locations.

In summary, economic activity in the Richmond area is slowly improving, and there is little evidence to suggest that this recovery will falter. Indeed, all expected events will have a positive effect upon economic activity.

TERRE HAUTE

TERRANCE C. PARKS

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(Terre Haute)*



Traditionally, the national economy booms in an election year, but this year it has deviated from the pattern. Although the economy con-

tinues to improve from the worst recession since World War II, the recovery has slowed markedly. In addition, the recent negative movement of some indicators may indicate further slowing in the near future. The economy of the Terre Haute SMSA resembles the national economy; its performance over the last six months has been lackluster, and the outlook for the near future is mixed.

Retail trade is an important sector in Terre Haute's economy. The city is the largest retail shopping center on Interstate 70 between Indianapolis and St. Louis; therefore, Terre Haute attracts a significant number of customers who reside outside the Terre Haute SMSA. In 1972, the area's 1,633 retail establishments had sales of \$428.3 million and employed nearly 18% of the labor force. A survey indicates that area retailers are optimistic, expecting an increase of approximately 9% in sales over last year. (After inflation is taken into consideration, real growth will be probably less than 3% for the year.) In addition, some of the retailers noted a freer spending attitude among consumers, which could signal heavier Christmas sales.

The agricultural sector appears to be another bright spot. Since 80% of the land in the Terre Haute SMSA is used for agriculture and 16% of the population resides in rural areas, conditions in the agricultural sector have a significant impact on the area's economy. A combination of factors should boost farm incomes slightly and contribute to further strength in farm land values, which have risen at an annual compound rate of 21.2% since 1972. Good weather at harvest time and expanded plantings should lead to larger yields. With the exception of wheat, grain prices have been relatively strong.

In the May-June edition of the *Indiana Business Review*, Robert F. Cook reported that the unemployment rate in the Terre Haute SMSA remained below Indiana's rate from April 1974 to March 1976. In March 1976, Indiana's seasonally adjusted rate was 6.2%; Terre Haute's was 5.6%. By July, Indiana's rate

had fallen to 5%, but Terre Haute's rate had fallen to only 5.2%. The latest data (August 1976) show Indiana with a rate of 5.2% and Terre Haute with 5.9%.

The large increase in Terre Haute's unemployment rate occurred because of a precipitous decline in employment in nonagricultural establishments during August. The primary decline was in the mining industry, where a labor dispute involved approximately 800 workers. This dispute has now been settled. Another labor dispute involving nearly 100 workers in transportation, communications and utilities also affected the rate. In addition, manufacturing employment was lower in August than July. Losses were reported in stone, clay and glass, primary metals, fabricated metals and nonelectrical machinery. During the first half of 1977, we project the area's unemployment rate to be slightly less than 5%.

The area's fabricated metals industry is related to capital spending by business. Since the Commerce Department reported that new orders for nondefense capital goods fell by 11.7% in August, we might expect that this sector would remain soft for the first half of 1977.

Construction activity has picked up in the area since midsummer. However, local building trades unions still report high levels of unemployment among their members, and some unions are sending craftsmen to jobs outside the area. Vigo County authorities report an upsurge in new building permits in the late summer months. In addition, several commercial enterprises have expansion plans for the coming year. Another new shopping center is planned for the south side of the city, and construction for a new hospital will start early next year. The Chamber of Commerce reports that businesses currently have plans to spend \$10 million during the next year for expansion projects. The Terre Haute area is still hopeful that the RDX plant in Vermillion County will be revitalized; governmental authorities will announce their decision on the plant early in 1977.

SOUTH BEND-ELKHART

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The South Bend-Elkhart area economy continues to expand faster than the state and national economies. The seasonally adjusted unemployment rate declined from its 1976 high of 5.9% in March to 4.4% in July before increasing to 4.8% in August. Elkhart's unemployment rate declined rapidly from its high of 6.8% in January to 3.2% in August. Nationally, the unemployment rate averaged 7.6%. Indiana's unemployment rate dropped from a high of 7% in January to a low of 5% in July, but the rate increased slightly in August to 5.2%. Both South Bend's rate and Elkhart's rate were well below the national rate for every month of 1976, and South Bend and Elkhart were below the state rate for every month except June, when South Bend's unemployment rate was equal to that of the state.

The continued expansion of economic activity in the area is also documented by local economic indicators, presented in the accompanying table. Seven of the eleven local indicators showed improvement from March to August 1976. Specifically, commercial natural gas sales increased 10%, the help wanted index gained 5%, new passenger and truck sales increased 3 and 50%, respectively, and the estimated value of new housing gained 40%. Four of the indicators declined from March to August, but these declines were less than 5%. Further, three of the four indicators exhibiting declines reached their 1976 peaks in June or July.

In spite of the generally high level of

economic activity in the area during 1976, union construction was quite depressed. Interviews with local union officials in July and August confirmed that unemployment was in the neighborhood of 20% for six of the eleven unions contacted and was above 10% for two of the remaining five unions. Fortunately, the prospect for 1977 in the construction trades is improved. In South Bend, several new buildings and expansions in the \$1 million to \$5 million range are being planned, a new facility for retail sales costing several million dollars is being considered, and expansion of the St. Joseph County Airport is a strong possibility. If these and other projects are under construction during 1977, the high unemployment rate in the construction industry should drop considerably.

The expansion experienced by the local economy in 1976 should level off in 1977. Many of the area's major employers are already operating at high levels of activity, so unless they expand their operations, it is unlikely there will be large increases in employment from these employers. Since considerable un-

certainty regarding the strength of the national recovery exists, it appears that no major expansions will be undertaken until this uncertainty is resolved. In addition, historically the second year of recovery periods usually experiences slower growth than the first year of recovery. If this trend continues, less stimulus can be expected from the national economy in 1977 than it provided in 1976. Finally, the possibility of higher oil prices causes some local uncertainty. The local economy is affected by the sales of motor vehicles, so a substantial increase in oil prices could have a detrimental impact.

In conclusion, local economic activity is expected to continue at current levels, but little expansion is projected for the coming year. Unemployment rates in South Bend should fluctuate between 4 and 5%. Unemployment rates in Elkhart should fluctuate between 2.5 and 3.5%. If the national recovery continues to falter, or if oil prices rise considerably, unemployment rates in our area should be near the top or above the forecast range.

Selected Economic Indicators for the South Bend-Elkhart Area, 1976
(1967 = 100, seasonally adjusted)

<i>Indicator</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>
Industrial electricity	136.7	128.2	122.8	141.4	128.9	130.2
Natural gas sales						
Commercial	122.2	108.9	130.5	111.3	132.3	135.2
Industrial	97.0	83.7	90.9	88.3	94.3	88.1
Bank debits	264.2	257.8	251.7	272.9	258.4	262.0
Nonagricultural employment	106.3	106.5	104.6	105.2	105.4	104.6
Help wanted index	80.5	89.2	73.2	87.7	86.0	84.9
Unemployment rate						
(percent of work force)						
South Bend	5.9	5.6	5.2	5.1	4.4	4.8
Elkhart	4.6	4.0	3.2	3.5	3.4	3.2
New passenger car sales	121.5	126.4	134.8	120.4	116.9	124.8
New truck sales	162.0	196.8	275.6	199.5	237.1	238.0
Estimated value of new housing permits	183.5	186.3	247.5	244.8	190.5	258.7

MUNCIE

R. R. JOST

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(Muncie)*



Historically, areas with a heavy concentration of durable goods manufacturing, such as the Great Lakes region, are vulnerable to the vicissitudes of the business cycle, suffering pronounced unemployment in the downswing, but recovering well in the upswing. Indiana's unemployment experience closely conformed to this pattern during the severe 1973-75 recession, and unemployment data for the Muncie SMSA ostensibly appears to fit the same pattern.

Unemployment in the Muncie SMSA peaked at over 11.5% during both August and September of 1975, and subsequently trended downward to 5.4% as of September 1976. This relatively rapid decline in unemployment is not quite typical of Muncie's past cyclical experience, for Muncie has tended to lag the cycle more than Indiana as a whole. Employment and population data provide a partial explanation for this somewhat atypical behavior. Using November 1973, the cyclical peak of the nation, as a reference, Muncie's employed nonagricultural labor force has subsequently declined by over 6% as of September 1976. Indeed, nonagricultural labor force data for the 1970s has been essentially flat, though the average 1976 data compare a bit unfavorably with 1970. It appears that the Muncie SMSA has experienced a very slow rate of growth during the 1970s and, as a consequence, many workers have withdrawn or delayed their entrance into the labor force.

Population trends for this area tend to

reinforce this interpretation. The population of the Muncie SMSA grew approximately 23% between 1950 and 1960, 15% during the sixties, but increased by only 300 people, or .2 of 1%, in the first half of the current decade. During this latter quinquennium, the Muncie SMSA experienced a net outmigration of 5,400 people, or 4.2% of the 1970 population. Between July 1, 1974 and July 1, 1975, the population actually declined by 1,100 people. What is true for Delaware County (in other words, the Muncie SMSA) is also generally true for Region 6, which includes the six surrounding counties, all of which have experienced a slower rate of population growth than many of the more rapidly growing regions of the state.

Ball State University's previously rapid growth contributed much to the population growth of Delaware County during the 1960s, but enrollment has leveled off in the 1970s, and both demographic data and IU-PUI enrollment figures in Richmond, Indianapolis, Kokomo and Fort Wayne suggest the real possibility of declining future enrollments.

The Muncie Composite Business Index currently registers a meager 113 over its 1967 base of 100, and the manufacturing component is down to 90. During the 1960s, employment in the manufacturing sector of the Muncie SMSA (and Region 6 as well) grew at a rate substantially lower than that of the state as a whole. Slower growth of manufacturing employment, which has a relatively high multiplier effect in terms of creating additional jobs, accounts for much of the flat growth rate of the employed nonagricultural labor force in the 1970s. Furthermore, the more pronounced growth of the trade and service and government sectors in the 1960s and early 1970s obviously has not spared the local economy from the severities of the 1973-75 recession.

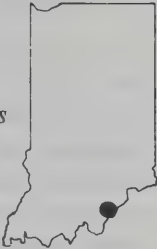
What is the outlook for the Muncie SMSA in 1977? Much depends on how the nation's economy fares. Despite the growing number of

Cassandras and some as yet unknown factors that could derail continued expansion, such as the size of the OPEC price rise and Carter's economic policies during the first 100 days, the odds still heavily favor moderate continued expansion of the nation's economy through 1977. It is hoped that the favorable outlook for both capital spending and auto sales will benefit the local machine tool and transportation equipment firms.

The most important economic news for the Muncie SMSA is the announcement of plans for a 166,780 square foot addition to the existing Chevrolet-Muncie manual transmission plant. This plant addition is expected to add several hundred workers to the payroll when it is completed and in operation by the Spring of 1978. Muncie's economic future is heavily dependent on decisions by business firms to expand or locate in Muncie, for these are the decisions from which jobs are created.

JEFFERSONVILLE-NEW ALBANY
(Louisville Area)

FAY E. GRECKEL
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At first glance, the Louisville area economy appears to have mirrored the national economic picture this year, with a strong expansion during the first few months, followed by a slowdown or slight decline. However, a closer examination indicates more robust conditions locally.

The first impression is supported by the business activity indexes shown in Table 1. The index of industrial production, based on industrial power usage and outbound rail freight,

TABLE 1
Index of Louisville Area Business Activity
(1967 = 100, seasonally adjusted)

	<i>October</i> <i>1975</i>	<i>April</i> <i>1976</i>	<i>July</i> <i>1976</i>	<i>October</i> <i>1976</i>
Industrial				
production	112.1	134.1	116.8	106.6
Transportation	152.6	161.4	162.9	165.1
Trade and				
services	122.4	132.0	126.3	125.5
Construction	127.2	106.7	122.8	111.1
Financial	271.0	281.1	281.8	292.3
Employment	116.4	115.4	116.5	114.1
<i>Composite index</i>	<i>136.0</i>	<i>147.1</i>	<i>140.6</i>	<i>137.1</i>

SOURCE: Research Department, Louisville Area Chamber of Commerce.

reached a peak in March and April that not only exceeded the 1975 level, but also surpassed the prerecession peaks of 1973 and 1974. After this strong showing, however, the industrial production index fell off during the summer and fall. The other indexes also rose more slowly, or fluctuated, after April, but still followed an upward trend through August or September.

While this sluggishness parallels conditions in the national economy, the local data may not really indicate an interrupted recovery. For example, most of the drop in industrial production between June and October resulted from strikes or vacation plant closings. These factors also reduced freight shipments out of the area, an important component of the transportation index. And the strikes held employment totals down as well.

On the positive side, reported department store sales have been running ahead of last year, and new car and truck sales have been particularly strong, surpassing the 1974 levels. Unemployment has dropped by nearly 10,000 workers, and the October 1976 unemployment rate for the metropolitan area was down to 6.4%, compared with 8.7% a year earlier. Even

TABLE 2

Employment and Unemployment in the Louisville Area,
July 1974–October 1976*

	<i>July 1974</i>	<i>October 1975</i>	<i>October 1976</i>
Clark and Floyd Counties			
Total nonfarm employment	42,400	39,200	39,500
Manufacturing	15,500	10,400	10,800
Nonmanufacturing	26,900	28,800	28,700
Residents unemployed	2,900	5,900	4,300
Unemployment rate	4.6%	9.4%	7.1%
Louisville Metropolitan Area†			
Total nonfarm employment	373,400	347,500	345,100
Manufacturing	118,800	101,900	99,100
Nonmanufacturing	254,700	245,700	246,000
Residents unemployed	16,700	34,000	24,600
Unemployment rate	4.2%	8.7%	6.4%

*The employment data refer to establishments located within the area cited; the unemployment data refer to residents of the area cited.

†Includes Floyd and Clark counties in Indiana; Jefferson, Oldham and Bullitt counties in Kentucky.

SOURCES: Indiana Employment Security Division, and Kentucky Department of Human Resources.

construction may be in better shape than it appears. New housing starts are up and the dollar value of housing permits is higher than in 1975. In Clark and Floyd counties, during the first ten months of 1976 housing starts were 25% higher than in the comparable period of 1975—and 20% higher than in 1974. Unfortunately, unemployment in the construction industry remains a distressingly high 17%. Many firms are apparently using existing employees more intensively, instead of rehiring the unemployed. In addition, the completion of several government-sponsored construction projects has eliminated numerous jobs.

The employment data in Table 2 show that the area is still well below the prerecession high

of July 1974. However, the low October 1976 figures for the metropolitan area are misleading, since there were some 7,000 striking workers from at least three different manufacturing industries not counted among the employed. Strikes had relatively little impact on the earlier employment statistics shown. Thus, it is obvious that both employment and the unemployment situation have improved considerably over the past year. Most of the employment gains were in durable goods manufacture, which nonetheless remained seriously below the 1974 job level, as did wholesale and retail trade and the construction industry.

As usual, the unemployment rate for Floyd and Clark county residents exceeds the metro-

politan area average. Still, the unemployment rate in the two Indiana counties has dropped considerably, from 9.4% a year earlier to 7.1% this October. It is disappointing that total employment in Floyd and Clark county establishments showed little improvement over the year, but unlike the situation in the rest of the metropolitan area, nonmanufacturing employment remained higher than in 1974. Over the past year, job gains in durable goods manufacture were partially offset by declines in firms producing nondurables. This trend will be reinforced in November by the permanent closing of Seinsheimer, Floyd County's second largest employer, with a loss of some 560 clothing industry jobs. While a more vigorous economy might have enabled the firm to survive, its basic problems stem from long-term developments within the clothing industry.

Over the next several months there will be some offsetting employment gains in Clark County, independent of business cycle developments. ICI, the operator of the Army ammunition plant, expects to rehire about 400 workers (after having laid off nearly 4,000 workers between 1974 and 1976), and the Census Bureau will probably add some employees as it begins preparations for the 1980 population census.

On the whole, the economic outlook for the area economy appears reasonably bullish. Retailers are very optimistic about holiday season sales and fairly optimistic about the year ahead. Construction activity should be picking up strength next spring. The expansion of single-family housing is expected to continue, and the low rental vacancy rate suggests that some multifamily dwellings will be under construction next year. A few major nonresidential projects, such as the Convention Center garage and the Hyatt-Regency Hotel, will also help boost industry employment.

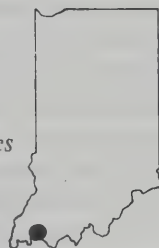
The recent election results indicate a somewhat expansionary fiscal policy on the national level, which should result in higher output and spending levels locally. If the incidence of strikes also diminishes, local employment totals

should rise noticeably in the months ahead. Unemployment should continue to decline, with the area unemployment rate likely to fall below 6% during the second half of 1977. Barring highly adverse developments on the international scene, the Louisville metropolitan area should enjoy a moderately strong recovery during the coming year.

EVANSVILLE

JOHN F. FICKS

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University of Evansville*



As measured by the Evansville Area Business Index (see table and figure), the regional economy began to recover in June 1975. Spurred by buoyant consumer spending, the index registered a strong 6% increase during third quarter 1975. Since then, however, the expansion in business activity has not been consistent.

After three consecutive monthly declines during fourth quarter 1975, the index rebounded in January. In fact, the first quarter of 1976 featured a remarkable 16% rise, the result of exuberant consumer spending, substantial inventory rebuilding (particularly in the refrigeration industry), and strong auto and truck sales, as well as healthy increases in construction, especially residential building. The apparent robustness of the recovery led some analysts to predict that 1976 would prove to be the best year in two decades for the Evansville regional economy.

Since March, however, the early optimism of the first quarter has been tempered. While still above the 1975 level, the second quarter proved to be sluggish, with the composite index registering a 1% decline. Both April and May data showed declines, as inventory rebuilding

Evansville Area Business Index (1967-69 = 100)

<i>Period</i>	<i>Industrial Production</i>	<i>Trade and Services</i>	<i>Con- struction</i>	<i>Trans- portation</i>	<i>Finance</i>	<i>Employ- ment</i>	<i>Composite Index</i>
1973	132.83	116.75	125.56	110.61	157.55	104.16	123.63
1974	126.26	111.88	112.64	101.72	192.00	102.44	119.16
1975	120.49	112.59	83.09	86.04	196.54	99.64	113.59
1976 estimate	132.85	125.10	105.23	84.40	221.20	101.55	123.78
1977 forecast	135— 138	127— 130	111— 115	87— 90	232— 235	102— 103	125— 128

began to level off and consumer spending moderated. June promised continued growth, as industrial production rose, inventories were rebuilt, retail sales increased and residential construction looked particularly strong. Still, employment dropped in the Evansville area for the first time since December, as inventories piled up and caused layoffs in refrigeration and air conditioning equipment as well as in furniture and fixtures.

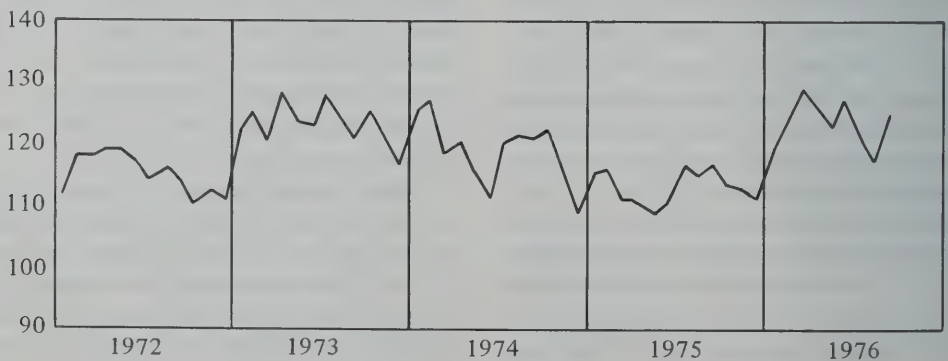
Third-quarter data cast further doubt on the certainty of recovery; the index showed a decline of 3%. Both July and August showed declines, with the index reaching its lowest level since December of 1975. Unemployment did decline by 900 during August, and Evansville's 5.3% rate of unemployment compared favorably with most Indiana regions and with the national rate of 7.9% (both seasonally adjusted). Nevertheless, total employment declined by 1,300 during the month, the result of labor-management disputes and lagging sales of

refrigeration and air conditioning equipment. The most optimistic forecast at that point was that the average level of business activity for 1976 would remain above that for 1975.

September data, however, revealed flashes of the earlier upward momentum as the index rose almost 6% to 124.38, the best performance since June and almost 12% above December 1975. Five of the six component factor indexes showed increases; only the transportation figure declined. The industrial production index revealed a sharp increase of almost 11% to 134.15, the highest level since June and the result of significant inventory accumulation.

The trade and services index also rose in September, the result of guarded optimism at the local level and back-to-school buying. The construction index rose to its highest level since June, as residential building showed a dynamic 35% rise from August and an 88% rise from September 1975 (all data seasonally adjusted). Although the unemployment rate remained

Evansville Area Business Index (1967-69=100)



constant at 5.3%, total employment rose by 400 as recalls mounted in the refrigeration industry, and wholesale and retail trade reached its highest level of the year. The only decline among the component factor indexes in September was in transportation, the result of a 10% drop in truck tonnage and a 5% decline in car loadings.

Based on this year's past performance, fourth quarter 1976 and 1977 will echo this sawtooth pattern of economic growth. Recent consumer confidence polls reveal positive changes occurring in consumer durables, which should provide a stimulus to the industrial production index and keep it at the 1973 level. Trade and services should continue to remain above 1973, while construction may reach the level of 1974. The financial and transportation sectors will continue to grow at a moderate rate, although dwarfing previous years' performances. While employment will increase, it will not reach its high point of 1974, nor will the unemployment rate change much from its present 5.3% (adjusted) rate. In short, 1977 will be a year of solid but hardly exuberant growth, surpassing 1973's record performance overall but rising at a slower rate than in 1976.

GARY-HAMMOND-EAST CHICAGO
(Calumet Area)

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Indiana University Northwest
(Gary)



Six months ago, in the May-June 1976 *Indiana Business Review*, we stated that the road of recovery would be somewhat bumpy, with a few mild retreats in the fourth quarter of 1976. We still believe that the current retreats will be relatively mild; however, the pause may extend

into the first quarter of 1977, after which the recovery will gather momentum and operate on its second breath. Our projections for the Gary-Hammond-East Chicago region are about on course. We expected the second quarter index to approach 125 by mid year (the index was 121). We projected about 135 by the middle of 1977. This prediction may still hold, although for it to be true, we would have to have a much steeper acceleration in the second quarter of 1977 than would have been consistent with the monetary-fiscal stance that had characterized the Ford-Burns administration.

On the price level front, which naturally affects real (physical) parameters, too, the local picture is somewhat uncertain. We have experienced consistent pressures on the price level by businesses, including heavy manufacturing, whose rate of capacity utilization was below par. Plant managers and local businessmen indicate that utilization of manufacturing capacity is about 8-9% below optimal (or most profitable) level. Retailing capacity ranges from about 15% below desired capacity utilization in foods, where much new expansion occurred, to about 9-10% in department stores. Residential stock is about 7% underutilized. This means that, at least locally, there will be mostly replacement investment and not much new expansion in 1977, except for a gradual materialization of long-run expansion of steel capacity in the new mills in Porter County.

Most of the pressure on prices will come from the supply side, as real wages weaken because of higher tax rates and externally induced price rises (fuel costs). The profit squeeze further exacerbates upward pressures on prices. So far, a moderately restrictive monetary policy, coupled with a belief on the part of businesses that further price rises would trigger a monetary crunch, has tended to contain a price surge. But 1977 may experience a lessening of monetary restrictions, which initially will bring about a round of price increases; however, as capacity utilization advances and output accelerates, profits will improve, thus relieving some of the upward

pressure on prices. This may spur moderation in local wage demands, as the slide in real wages recedes, towards the latter quarters of 1977 and the beginning of 1978.

A recent study supports such a prognosis. Using regression techniques, we found that in 1975-1976, average net profits before taxes in northern Indiana were about 7.17% of gross sales. Profits are a function of capacity utilization and other variables. We expect about an 8% increase in local capacity utilization for 1977, from about 74% to about 82%. Thus, if our predictive equations hold, this will cause net profits to rise to about 8.98%, or nearly 9%, of gross sales.

We had also stated that the employment picture may continue to be mixed. One must bear in mind that the northwest Indiana region has an average unemployment rate of about 5.4%, much below the state, Chicago or the national averages. Thus, even though employment is mixed, it is at a high level. On the other hand, this region also has a stubborn core of unemployed and, as the local Manpower Surveys by the federal government indicate, there is not much hope for improvement. In some months, up to 49-55% of the vacancies in manufacturing and middle management were not filled because of the applicants' lack of skills.

Steel and related manufacturing, which represents almost 30% of regional employment, is stabilizing its labor force (some fringes, such as craft training programs, were drastically reduced or eliminated). The real growth rate is expected to hover around 4%. Services may grow at a slightly higher rate; hotels, hospitals, new retail outlets, laboratories and professional offices are expected to expand in the new core shopping areas surrounding the Broadway, U. S. 30, I-65, Sixty-first Street region. The new professional and commercial area will gradually extend east towards Valparaiso and west towards Schererville.

Ten years ago, when there was only farmland on either side of U. S. 30, we projected in this publication a major transmigration of

shopping facilities to their present locations. We are now in the process of completing our next decennial forecast. Preliminary indications are that the core cities of Hammond, Gary and East Chicago will retain about 55% of the population and about 38% of retail outlets, while the SMSA balance of 45% will have access to about 62% of the retail stores located outside the core cities. Such demographic changes will increase pressures for a metropolitan type government, with cities as satellites.

We cannot complete this outlook without examining what the new Carter policies might mean for this area. Most businessmen suspect that there is no acceptable remedy for the inflation-unemployment tradeoff, with the possible exception of wage-price controls. However, a proposal is under consideration which might solve the problem without resorting to drastic measures.

New jobs in the public sector would be created by a shelf of approved short and intermediate projects—mostly in urban regions—whenever the national adult unemployment rate exceeded a predetermined level (say, 6%). This would immediately activate a *value added* tax of a given magnitude (say, 1% for each 1% of unemployment over 6%). The new jobs in the public sector would be financed dollar for dollar by a tax on private sector outputs. Thus, the cost of unemployment would be shared without the usual inflationary pressures caused by unrestrained and embedded deficits. As soon as private sector unemployment recedes, the tax would be correspondingly scaled down, providing the necessary stimulus during the recovery and preventing the frequent second dips of recent cyclical history. A return of resources from the public to the private sector would be assured by keeping public sector wages sufficiently below private wages. We predict that President Carter will not adopt wage-price controls, owing to the fact that more efficient income policies are available which encourage the private sector to mop up unemployed resources and which are not destructive of work effort.

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Indiana Business Review

Volume 51, No. 11

November 1976

DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by Pradeep Bansod, Gladys Huang, Judy Norman and Ernest Summers

UNITED STATES-INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

	UNITED STATES				INDIANA		
EMPLOYMENT		<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Nonagricultural employment	Sept.	120.8	120.5	117.4	Sept.	111.5	112.0
Manufacturing employment	Sept.	98.3	97.5	94.7	Sept.	94.2	93.4
Average weekly hours (no.)†	Sept.	40.0	39.9	40.2	Sept.	40.4	40.7
Average weekly earnings (\$)†	Sept.	212.00	207.88	196.58	Sept.	246.0	245.8
Nonmanufacturing employment	Sept.	99.6	99.0	96.0	Sept.	123.4	124.3
Unemployment rate (%)	Sept.	7.8	7.9	8.6	Sept.	5.2	5.2
Unemployment rate—married males (%)	Sept.	4.6	4.2	5.5	—	—	—
Continued unemployment claims	—	—	—	—	Sept.	227.32	217.37
							430.9
PRODUCTION							
Bituminous coal production	Aug.	115.2	106.7	108.1	Aug.	—	—
Industrial electricity production	May	141.8	142.0	130.5	—	—	—
Industrial electricity sales	—	—	—	—	Aug.	148.6	148.6
Manufacturing production	Sept.	131.6	131.7	114.7	Aug.	134.8	135.1
Raw steel	Aug.	109.5	113.0	85.3	Aug.	137.7	135.4
							109.0
CONSTRUCTION							
Construction activity—total	Aug.	189.0	187.5	170.6	Aug.	194.8	191.2
Residential housing starts	Sept.	141.2	120.0	101.5	Aug.	131.1	163.7
Residential expenditures	Aug.	237.1	238.7	182.5	Aug.	294.8	288.3
Nonresidential expenditures	Aug.	165.5	162.5	164.9	Aug.	152.10	152.7
Public expenditures	Aug.	145.4	143.4	156.4	—	—	—
Public works and utilities	—	—	—	—	Aug.	126.4	127.8
							118.7
OTHER INDICATORS							
Debits to demand deposits	Aug.	390.3	366.1	336.6	—	—	—
Bank debits	—	—	—	—	Aug.	360.2	334.4
Personal income per capita (\$)	July	2,728.8	2,695.5	2,797.1	1976 II	6,178.87	5,997.18
Passenger car sales (thousands)†	Sept.	794.0	762.0	727.0	Aug.	20.6	23.4
Year to date (thousands)	Sept.	7,597.0	6,803.0	6,310.0	Aug.	174.4	153.7
							138.1

*Current indicators are preliminary and subject to revision.

†Not seasonally adjusted.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for

the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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UNITED STATES BUSINESS INDICATORS

Quarterly Data

	Seasonally Adjusted Annual Rates (\$ billions)			Percentage Change at Annual Rates		
	1976 3 Qtr.	1976 2 Qtr.	1975 3 Qtr.	1976 3 Qtr.	1976 2 Qtr.	1975 3 Qtr.
Gross national product (GNP)	1,709.7	1,675.2	1,548.7	8.5	9.9	19.2
GNP (\$ 1972)	1,272.2	1,260.0	1,209.3	-3.9	4.5	11.4
GNP potential level (\$ 1972)*	1,414.6	1,401.6	1,361.8	3.8	3.7	4.0
Government purchases	369.5	362.0	343.2	8.5	8.5	12.6
Personal consumption expenditures*	1,064.7	1,043.6	960.3	8.3	13.1	12.1
Private domestic investment	245.5	239.2	196.7	11.0	17.8	104.9
Corporate profits*	146.2	141.1	105.8	15.3	33.4	59.1
Change in business inventories	14.4	16.0	-2.0	—	—	—
Federal surplus—deficit (NIA)*	-54.1	-63.8	-99.9	—	—	—

*Data are for preceding quarter

Monthly Data

	Current Levels or Annual Rates			Percentage Change at Annual Rates		
	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index*	Sept. 172.5	171.8	163.5	Sept. 5.0	6.5	5.3
Consumer price index—food*	Sept. 181.8	181.8	178.0	Sept. —	4.0	3.4
Wholesale price index*	Sept. 184.5	182.8	177.5	Sept. 11.7	-1.3	10.7
Money supply (\$ billions)	Sept. 306.2	306.3	293.6	Sept. -0.4	6.1	1.6
Money supply plus time deposits	Sept. 719.4	713.4	652.9	Sept. 10.6	10.3	4.3
Mobile home shipments (thousands)	July 224.0	233.0	213.0	July -37.7	-73.2	100.5
Mortgages—outstanding (\$ billions)†	Aug. 308.0	303.8	267.7	Aug. 18.0	18.4	15.8
Mortgages—new issues (\$ billions)†	Aug. 93.0	93.3	68.8	—	—	—
Mortgage rate—new homes (%)	Aug. 9.0	9.0	8.9	—	—	—
Prime rate business loans (%)	Sept. 7.0	7.0	7.9	—	—	—

*Base period, 1967 = 100

†All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Sept. 1976	Aug. 1976	Sept. 1975	INDIANA	Sept. 1976	Aug. 1976	Sept. 1975
Manufacturing	98.2	97.3	94.9	Manufacturing	91.9	93.6	88.7
Food	95.0	94.6	94.9	Food	79.5	79.7	75.7
Apparel and textiles	90.9	92.5	89.4	Apparel and textiles	89.2	87.3	86.7
Lumber and wood	101.6	101.2	93.3	Lumber and wood	80.6	80.8	78.3
Furniture	101.5	101.2	97.1	Furniture	98.9	97.0	96.0
Paper	98.1	98.4	93.1	Paper	86.7	86.9	88.4
Printing	101.2	101.0	98.5	Printing	100.1	101.1	91.4
Chemicals	104.6	102.7	99.9	Chemicals	104.6	103.9	104.6
Petroleum and coal	109.4	108.8	106.5	Petroleum and coal	69.4	68.0	69.0
Rubber	118.1	106.2	111.5	Rubber	89.4	87.1	96.6
Stone, clay, and glass	98.0	98.4	95.6	Stone, clay, and glass	92.9	92.9	91.1
Primary metals	94.0	92.9	88.4	Primary metals	95.5	97.6	89.4
Fabricated metals	100.1	100.7	94.9	Fabricated metals	98.4	101.3	99.4
Nonelectrical machinery	101.8	103.1	98.3	Nonelectrical machinery	99.9	102.1	95.3
Electrical machinery	91.3	92.7	87.9	Electrical machinery	85.0	89.4	84.3
Transport equipment	89.8	90.2	83.7	Transport equipment	100.2	102.7	87.0

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	Aug. 1976	July 1976	Aug. 1975	REPORTING CITIES	Aug. 1976	July 1976	Aug. 1975
ANDERSON				EVANSVILLE			
BD*	192.8	214.5	158.7	BD	235.7	235.3	180.6
CUC†	241.7	255.9	518.3	CUC	138.2	131.7	272.1
IES‡	142.1	135.2	129.9	IES	127.4	108.7	122.3
BEDFORD				FORT WAYNE			
CUC	214.7	158.3	324.7	BD	333.5	311.6	263.0
IES	149.4	148.4	126.9	CUC	256.4	229.9	776.2
BLOOMINGTON				IES	109.5	109.2	97.2
BD	279.6	303.3	282.0	FRANKFORT			
CUC	258.1	240.1	419.1	CUC	355.8	297.6	1,072.4
IES	98.1	101.3	91.4	IES	178.9	151.7	154.5
COLUMBUS				GARY			
BD	345.5	312.6	324.5	BD	286.9	355.8	260.6
CUC	128.7	119.3	404.4	CUC	149.3	132.9	343.3
IES	156.2	156.4	145.9	IES	158.4	174.1	132.0
CONNERSVILLE				GOSHEN			
BD	213.3	211.4	185.7	BD	313.8	284.1	212.8
CUC	91.0	104.2	267.6	IES	172.8	187.5	149.3
IES	116.3	142.3	116.7	HAMMOND §			
CRAWFORDSVILLE				IES	163.2	160.1	148.3
BD	—	—	245.4	HUNTINGTON			
CUC	569.4	666.8	1,157.5	CUC	256.6	259.8	993.9
IES	165.0	160.2	154.8	IES	124.2	126.5	124.6
EAST CHICAGO				INDIANAPOLIS			
BD	224.0	223.9	229.0	BD	512.6	433.2	468.3
CUC §	219.6	185.2	430.7	CUC	82.7	82.0	274.0
IES	69.3	70.0	82.1	IES	140.9	138.4	139.2
ELKHART				JEFFERSONVILLE			
BD	282.5	265.7	219.7	BD	299.4	326.4	309.6
CUC	184.4	183.9	473.6	IES	144.1	149.2	135.2
IES	158.7	153.2	143.5	KOKOMO			

INDIANA IN PERSPECTIVE

After two years of failing to record growth in *real* personal income, Indiana rebounded from the recession with growth greater than the national pace. The long recession and high rates of inflation in recent years have left *real* Indiana personal income in the second quarter of 1976 *below* its level in the same quarter of 1973.

	Total Personal Income*	Percent Change from One Year Ago			
	2 Qtr. 1976	2 Qtr. 1974	2 Qtr. 1975	2 Qtr. 1976	
United States	1,370,584	9.2	8.3	10.8	
Indiana	32,816	6.8	6.3	11.6	
Illinois	83,365	8.3	8.1	12.2	
Kentucky	18,088	14.8	7.2	10.8	
Michigan	62,884	5.7	5.8	13.7	
Ohio	67,517	7.8	6.2	9.6	
Consumer price index		10.6	9.7	6.0	

Seasonally adjusted at annual rates in millions of current dollars.

SOURCE: U. S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Division.

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of East Chicago and Hammond are combined

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	Aug. 1976	July 1976	Aug. 1975	REPORTING CITIES	Aug. 1976	July 1976	Aug. 1975
MICHIGAN CITY				SEYMOUR			
BD *	278.2	306.8	252.4	BD	352.2	377.1	309.9
CUC †	195.3	226.5	462.0	CUC	76.3	36.3	297.6
IES ‡	164.6	174.7	191.7	IES	107.7	121.6	91.9
MISHAWAKA				SOUTH BEND			
BD	153.8	138.7	227.4	BD	243.6	239.0	190.5
IES	146.7	129.9	132.6	CUC	208.5	145.1	408.7
MUNCIE				IES	114.1	109.9	101.3
BD	272.0	233.3	252.1	TERRE HAUTE			
CUC	131.5	98.5	312.4	BD	244.9	257.6	241.5
IES	106.7	101.8	92.1	CUC	287.5	236.1	322.9
NEW ALBANY				IES	166.5	145.1	153.1
BD	405.2	370.1	380.2	VALPARAISO			
CUC	407.5	499.6	637.6	CUC	157.7	138.2	383.1
IES	97.8	95.6	95.7	IES	189.7	186.7	179.5
NEW CASTLE				VINCENNES			
BD	373.3	287.1	246.6	BD	267.0	243.8	232.4
CUC	202.8	122.1	401.9	CUC	131.5	127.4	233.2
IES	174.5	181.6	135.5	IES	192.2	152.7	110.2
PERU				WABASH			
BD	276.4	258.0	212.7	BD	222.4	199.1	173.0
CUC	249.6	274.8	429.5	CUC	249.4	157.2	363.4
IES	180.9	189.7	170.4	IES	153.4	155.7	130.4
RICHMOND							
BD	—	—	166.4				
CUC	166.3	199.5	580.3				
IES	116.9	107.2	103.2				

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

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Indiana Business Review

Volume 51, No. 12

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DATA SUPPLEMENT: A REVIEW OF RECENT SELECTED BUSINESS INDICATORS

Prepared by Pradeep Bansod, Gladys Huang, Judy Norman and Ernest Summers

UNITED STATES—INDIANA BUSINESS REVIEW*

Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100

EMPLOYMENT	UNITED STATES			INDIANA		
	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>	<i>Latest Month</i>	<i>Previous Month</i>	<i>One Year Ago</i>
Nonagricultural employment	Oct. 120.8	120.8	117.8	Oct. 111.4	111.5	109.7
Manufacturing employment	Oct. 97.6	98.3	95.1	Oct. 92.8	94.2	90.9
Average weekly hours (no.)†	Oct. 39.9	40.1	39.9	Oct. 40.5	40.3	39.7
Average weekly earnings (\$)†	Oct. 211.07	212.53	195.51	Oct. 248.27	247.04	222.72
Nonmanufacturing employment	Oct. 130.4	130.1	127.2	Oct. 123.8	123.4	122.2
Unemployment rate (%)	Oct. 7.9	7.8	8.6	Oct. 5.3	5.2	8.5
Unemployment rate—married males (%)	Sept. 4.6	4.2	5.5	—	—	—
Continued unemployment claims	—	—	—	Oct. 223.0	227.3	366.6
PRODUCTION						
Bituminous coal production	Sept. 123.9	115.2	116.6	Sept. —	—	122.0
Industrial electricity production	Sept. 143.7	137.3	144.3	—	—	—
Industrial electricity sales	—	—	—	Sept. 150.6	148.6	135.1
Manufacturing production	Oct. 130.0	131.0	115.8	Sept. 135.0	134.8	126.2
Raw steel	Dec. 103.4	109.5	92.1	Sept. 124.2	137.7	123.5
CONSTRUCTION						
Construction activity—total	Sept. 192.8	189.0	176.0	Sept. 189.9	194.8	160.3
Residential housing starts	Oct. 139.5	144.6	111.4	Sept. 127.5	137.1	103.3
Residential expenditures	Sept. 244.3	237.1	190.6	Sept. 298.1	294.8	218.3
Nonresidential expenditures	Sept. 167.8	165.5	168.9	Sept. 152.1	152.0	133.0
Public expenditures	Sept. 146.7	145.4	159.6	—	—	—
Public works and utilities	—	—	—	Sept. 117.8	126.4	137.9
OTHER INDICATORS						
Debits to demand deposits	Sept. 386.6	390.3	335.4	—	—	—
Bank debits	—	—	—	Sept. 390.0	367.3	316.5
Personal income per capita (\$)	July 6,414.1	6,370.5	5,818.2	1976 II 6,178.87	5,997.18	5,537.56
Passenger car sales (thousands)†	Oct. 869.0	792.0	889.0	Sept. 17.6	20.6	18.8
Year to date (thousands)	Oct. 8,464.0	7,595.0	7,199.0	Sept. 192.0	174.4	156.9

*Current indicators are preliminary and subject to revision.

†Not seasonally adjusted.

SOURCE: Data on Indiana construction activity from McGraw-Hill Information Systems Company; Indiana passenger car registrations from R. L. Polk & Co.; indexes of raw steel production for

the United States and Indiana courtesy of the American Iron and Steel Institute, Washington, D. C.; all other data from U. S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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UNITED STATES BUSINESS INDICATORS

Quarterly Data

Seasonally Adjusted Annual Rates (\$ billions)

Percentage Change at Annual Rates

	1976 3 Qtr.	1976 2 Qtr.	1975 3 Qtr.	1976 3 Qtr.	1976 2 Qtr.	1975 3 Qtr.
Gross national product (GNP)	1,708.4	1,675.2	1,548.7	8.2	9.9	19.2
GNP (\$ 1972)	1,271.7	1,260.0	1,209.3	3.8	4.5	11.4
GNP potential level (\$ 1972)	1,427.7	1,414.6	1,375.2	3.8	3.8	4.0
Government purchases	369.6	362.0	343.2	8.7	8.5	12.6
Personal consumption expenditures	1,088.5	1,064.7	987.3	9.2	8.3	11.7
Private domestic investment	247.0	239.2	196.7	13.7	17.8	104.9
Corporate profits	150.2	146.2	126.9	11.4	15.3	107.0
Change in business inventories	15.1	16.0	-2.0	—	—	—
Federal surplus—deficit (NIA)	-57.1	-54.1	-66.0	—	—	—

Monthly Data

Current Levels or Annual Rates

Percentage Change at Annual Rates

	Latest Month	Previous Month	One Year Ago	Latest Month	Previous Month	One Year Ago
Consumer price index*	Oct. 173.1	172.5	164.5	Oct. 4.3	-100.0	7.6
Consumer price index—food*	Oct. 182.3	181.8	179.6	Oct. 3.4	-100.0	11.3
Wholesale price index*	Oct. 185.6	184.5	179.4	Oct. 7.4	11.7	13.6
Money supply (\$ billions)	Oct. 309.9	306.3	293.4	Oct. 15.1	—	-0.8
Money supply plus time deposits	Oct. 725.8	716.4	655.8	Oct. 16.9	5.2	5.5
Mobile home shipments (thousands)	July 224.0	233.0	213.0	July -37.7	-73.2	100.5
Mortgages—outstanding (\$ billions)†	Sept. 312.2	308.0	270.6	Sept. 17.3	18.0	13.7
Mortgages—new issues (\$ billions)†	Sept. 87.0	120.0	67.1	—	—	—
Mortgage rate—new homes (%)	Oct. 9.1	9.1	9.0	—	—	—
Prime rate business loans (%)	Oct. 6.8	7.0	8.0	—	—	—

*Base period, 1967 = 100

†All savings and loan associations

MAN-HOURS IN INDUSTRIAL PRODUCTION
Seasonally Adjusted Indexes; Base Period: 1967 = 100

UNITED STATES	Oct. 1976	Sept. 1976	Oct. 1975	INDIANA	Oct. 1976	Sept. 1976	Oct. 1975
Manufacturing	96.3	98.4	94.0	Manufacturing	93.9	91.9	89.0
Food	94.0	94.6	93.8	Food	84.8	80.1	79.0
Apparel and textiles	90.1	91.2	91.5	Apparel and textiles	81.9	87.8	93.8
Lumber and wood	103.2	101.2	95.3	Lumber and wood	85.0	79.8	84.8
Furniture	100.8	101.4	97.9	Furniture	97.6	99.1	95.1
Paper	96.4	98.2	94.3	Paper	88.3	86.3	90.9
Printing	100.9	101.1	98.7	Printing	97.2	98.4	92.8
Chemicals	102.8	104.2	100.6	Chemicals	106.6	104.8	105.3
Petroleum and coal	107.8	108.6	107.3	Petroleum and coal	68.2	69.4	67.5
Rubber	121.1	120.5	112.6	Rubber	102.6	90.1	96.0
Stone, clay, and glass	99.0	98.5	95.6	Stone, clay, and glass	93.4	92.9	89.8
Primary metals	94.7	93.7	88.3	Primary metals	97.5	95.9	88.4
Fabricated metals	98.4	100.5	95.3	Fabricated metals	99.2	98.8	99.9
Nonelectrical machinery	101.1	102.2	98.2	Nonelectrical machinery	100.7	99.3	95.5
Electrical machinery	94.9	92.9	88.5	Electrical machinery	89.0	84.8	85.2
Transport equipment	86.8	88.4	82.7	Transport equipment	96.9	100.3	86.9

INDIANA LOCAL INDICATORS

Seasonally Adjusted Indexes

Base Period: 1967 = 100

REPORTING CITIES	Sept. 1976	Aug. 1976	Sept. 1975	REPORTING CITIES	Sept. 1976	Aug. 1976	Sept. 1975
ANDERSON				FORT WAYNE			
BD*	227.9	192.8	162.9	BD	348.5	333.5	281.2
CUC†	260.7	241.7	519.8	CUC	280.7	256.4	959.6
IES‡	138.1	142.1	136.2	IES	107.1	109.5	94.3
BEDFORD				FRANKFORT			
CUC	223.5	214.7	300.4	CUC	292.7	355.8	999.0
IES	150.0	149.4	135.8	IES	164.8	178.9	157.0
BLOOMINGTON				GARY			
BD	278.7	279.6	312.8	BD	289.2	286.9	316.7
CUC	297.2	258.1	440.9	CUC	152.7	149.3	304.1
IES	98.9	98.1	97.9	IES	165.9	158.4	142.3
COLUMBUS				GOSHEN			
BD	330.0	345.5	350.7	BD	284.5	313.8	246.1
CUC	171.6	128.7	372.7	IES	183.8	172.8	155.5
IES	163.4	156.2	158.7	HAMMOND §			
CONNERSVILLE				IES	168.3	163.2	151.5
BD	212.2	213.3	201.2	HUNTINGTON			
CUC	137.5	91.0	295.4	CUC	237.8	256.6	890.2
IES	122.5	116.3	134.1	IES	123.9	124.2	119.2
CRAWFORDSVILLE				INDIANAPOLIS			
BD	—	—	286.6	BD	543.0	512.6	423.2
CUC	574.9	569.4	945.4	CUC	81.4	82.7	186.3
IES	167.5	165.0	155.3	IES	142.9	140.9	142.0
EAST CHICAGO				JEFFERSONVILLE			
BD	183.0	224.0	202.2	BD	323.5	299.4	308.6
CUC §	111.8	219.6	510.4	IES	144.2	144.1	140.9
IES	70.9	69.3	86.6	KOKOMO			
ELKHART				CUC	345.6	390.7	537.7
BD	318.3	282.5	242.2	IES	177.7	219.5	156.3
CUC	192.5	184.4	466.5	LAFAYETTE			
IES	150.5	158.7	144.9	BD	240.0	220.5	243.7
EVANSVILLE				CUC	405.4	396.6	1,208.7
BD	250.9	235.7	208.3	IES	141.9	138.6	122.0
CUC	162.4	138.2	297.9	LA PORTE			
IES	133.4	127.4	123.3	CUC	248.9	260.1	635.9
				IES	189.0	192.8	187.4
				LOGANSPOUT			
				BD	337.4	343.0	375.0
				CUC	113.1	108.3	427.5
				IES	219.6	217.2	289.5
				MADISON			
				BD	263.3	230.6	227.3
				CUC	149.5	177.5	413.2
				IES	143.7	113.1	126.1
				MARION			
				CUC	—	—	349.9
				IES	113.4	117.6	111.3
				MICHIGAN CITY			
				BD	312.6	278.2	156.7
				CUC	184.5	195.3	450.1
				IES	181.1	164.6	173.8

INDIANA IN PERSPECTIVE

Personal Income, Second Quarter, 1976

	Total Personal Income*	Percent Change From One Year Ago		
		2 Qtr. 1974	2 Qtr. 1975	2 Qtr. 1976
	2 Qtr. 1976			
United States	1,370,584	9.2	8.3	10.8
Indiana	32,816	6.8	6.3	11.6
Illinois	83,365	8.3	8.1	12.2
Kentucky	18,088	14.8	7.2	10.8
Michigan	62,884	5.7	5.8	13.7
Ohio	67,517	7.8	6.2	9.6
Consumer price index	—	10.6	9.7	6.0

*Seasonally adjusted to annual rates in millions of current dollars.

SOURCE: U.S. Dept. of Commerce, Bureau of Economic Analysis, Regional Economic Division.

*Bank Debits

†Continued Unemployment Claims

‡Industrial Electricity Sales

§Continued Unemployment Claims of
East Chicago and Hammond are combined

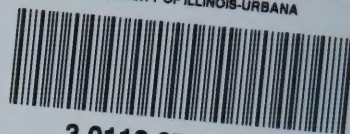
INDIANA LOCAL INDICATORS
Seasonally Adjusted Indexes
Base Period: 1967 = 100

REPORTING CITIES	Sept. 1976	Aug. 1976	Sept. 1975	REPORTING CITIES	Sept. 1976	Aug. 1976	Sept. 1975
MISHAWAKA				SOUTH BEND			
BD*	165.6	153.8	257.3	BD	276.4	243.6	237.9
IES†	137.0	146.7	134.1	CUC	234.9	208.5	396.3
MUNCIE				IES	111.7	114.1	104.5
BD	299.2	272.0	281.7	TERRE HAUTE			
CUC ‡	107.6	131.5	263.0	BD	261.3	244.9	275.6
IES	103.4	106.7	110.2	CUC	325.0	287.5	316.7
NEW ALBANY				IES	161.0	166.5	155.7
BD	458.9	405.2	398.6	VALPARAISO			
CUC	468.5	407.5	1,029.2	CUC	128.5	157.7	404.3
IES	99.6	97.8	97.5	IES	178.1	189.7	158.2
NEW CASTLE				VINCENNES			
BD	358.8	373.3	265.5	BD	280.7	267.0	354.1
CUC	141.7	202.8	337.0	CUC	116.3	131.5	238.9
IES	182.0	174.5	139.3	IES	197.8	192.2	116.3
PERU				WABASH			
BD	298.4	276.4	284.7	BD	264.7	222.4	233.5
CUC	198.2	249.6	366.3	CUC	227.8	249.4	390.5
IES	201.0	180.9	177.0	IES	156.0	153.4	148.8
RICHMOND							
BD	-	-	198.8				
CUC	172.1	166.3	616.9				
IES	114.7	116.9	107.5				
SEYMOUR							
BD	383.5	352.2	323.2				
CUC	101.1	76.3	275.0				
IES	117.8	107.7	95.4				

*Bank Debits
†Industrial Electricity Sales
‡Continued Unemployment Claims

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